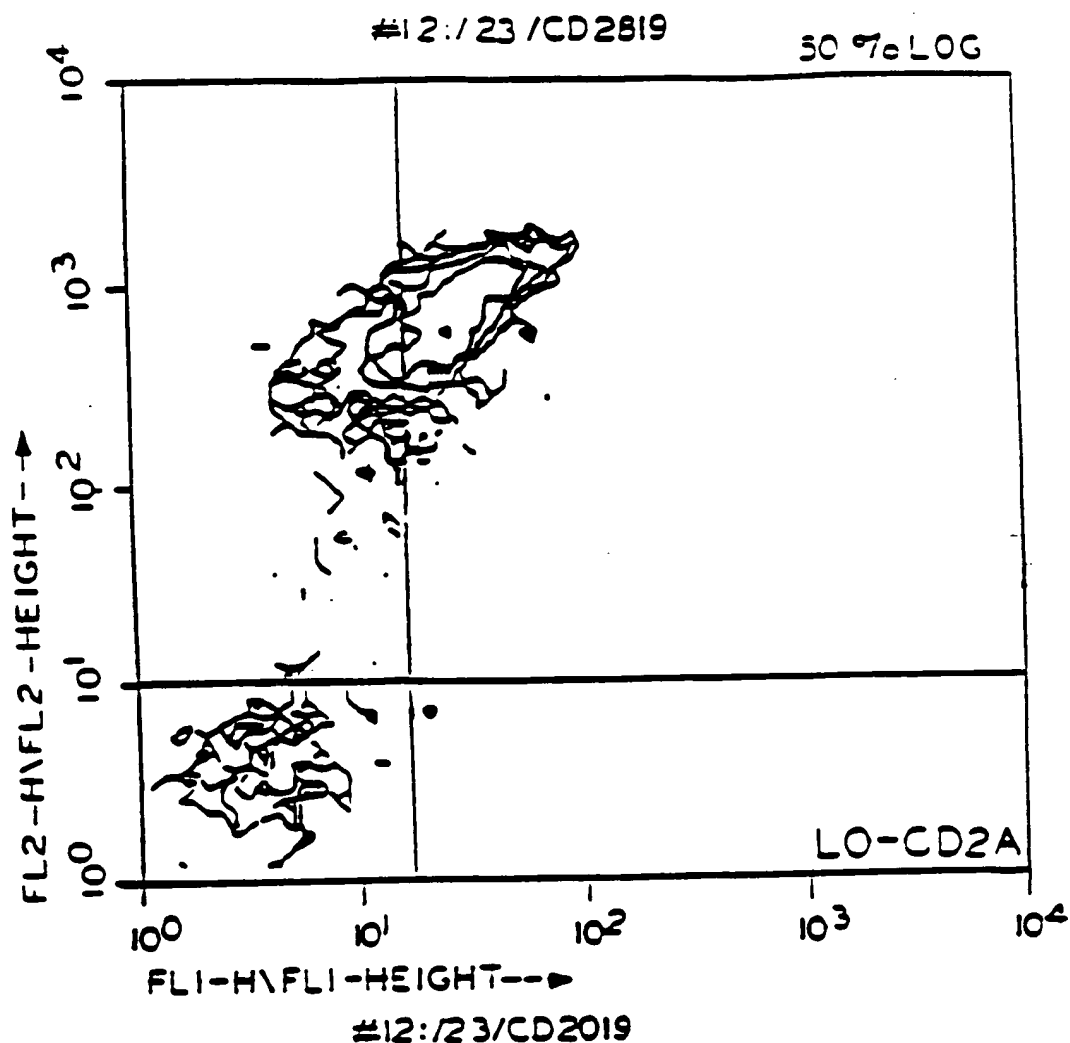


862040"22095060

1/41

FIG. 1



--- QUAD STATS ---

FILE: #12:/23/CD2019 SAMPLE: 059

DATE: 9/24/92 GATE G1-R1

PARMETER: FL1-H\ (LOG) FL2-H\ (LOG) QUAD LOCATION: 17.15.9

TOTAL = QUAD	5000 EVENTS	GATED = % GATED	1290 % TOTAL	X MEAN	Y MEAN
1UL	299	23.18	3.98	11.41	284.69
2UR	831	65.97	17.02	32.70	630.65
3LL	135	10.47	2.70	4.08	3.31
4LR	5	0.39	0.10	25.11	6.54

ACQ CMD INST-CTRL GATES FORMAT PROTO SAVE

ACQUIRE

BEGIN

FINISH

ABORT

RESTART

ZOOM 128

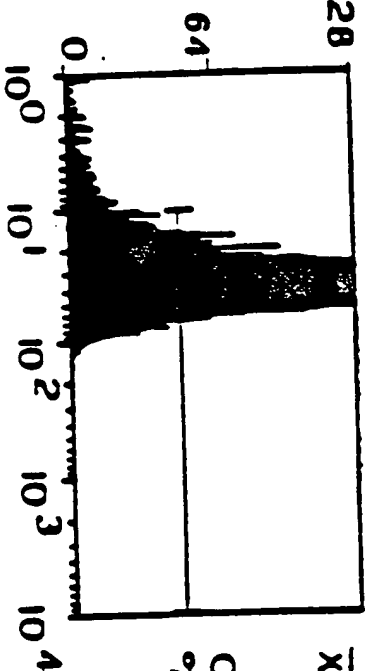
TYPE

GI

DOTS

RGD

STAT



$\bar{x} = 307.6$
 $CU = 13.3$
 $\sigma_0 = 91.8$

ACQ MODES

ALL CELLS

TOTAL

18,980

TOTAL RATE

0

ACCEPT

18,980

ELAPSED TIME

00:00:48

ZOOM 128

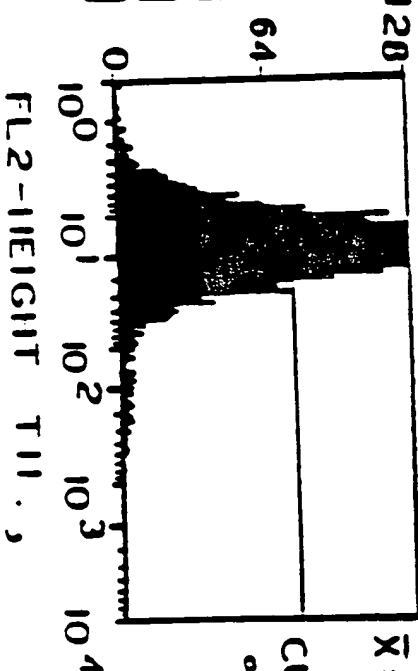
TYPE

GI

DOTS

RGD

STAT



$\bar{x} = 342.1$
 $CU = 19.4$
 $\sigma_0 = 79.1$

FIG. 2A

ACO CMD INST-CTRL GATES FORMAT PROTO SAVE

ACQUIRE

BEGIN

FINISH

ABORT

RESTART

ZOOM 128

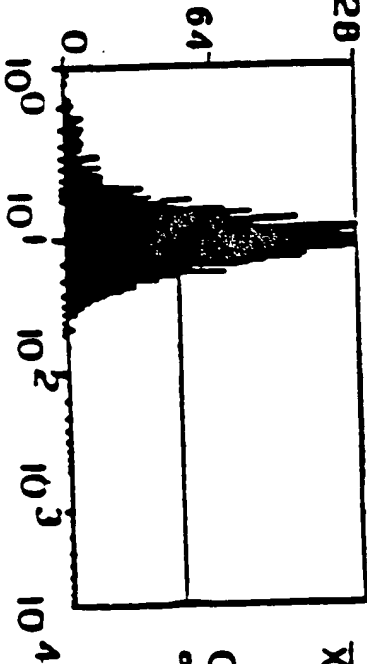
TYPE

CI

DOTS

RGNI

STAT



$\bar{X} = 337.1$
 20.7
 $CU = 12.8$
 $\sigma_0 = 84.7$

FIG. 2B

ACQ MODES

ALL CELLS

TOTAL

13,740

TOTAL RATE

0

ACCEPT

13,740

ELAPSED TIME

00:00:35

ZOOM 28

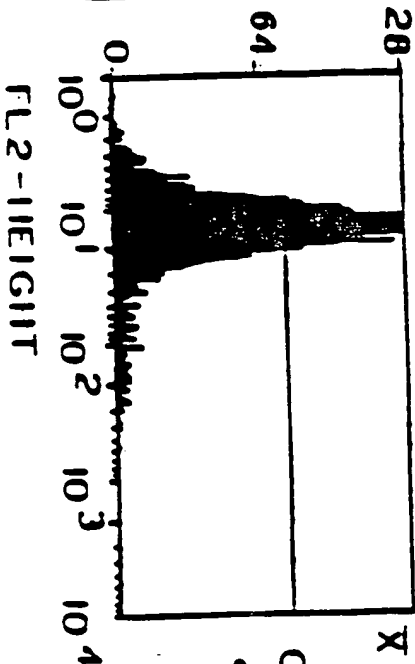
TYPE

CI

DOTS

RGNI

STAT



$\bar{X} = 326.8$
 10.9
 $CU = 21.5$
 $\sigma_0 = 68.6$

LeuS-b

09056072.040798

FIG. 3A'

PBMC WITHOUT LO-CD2- α

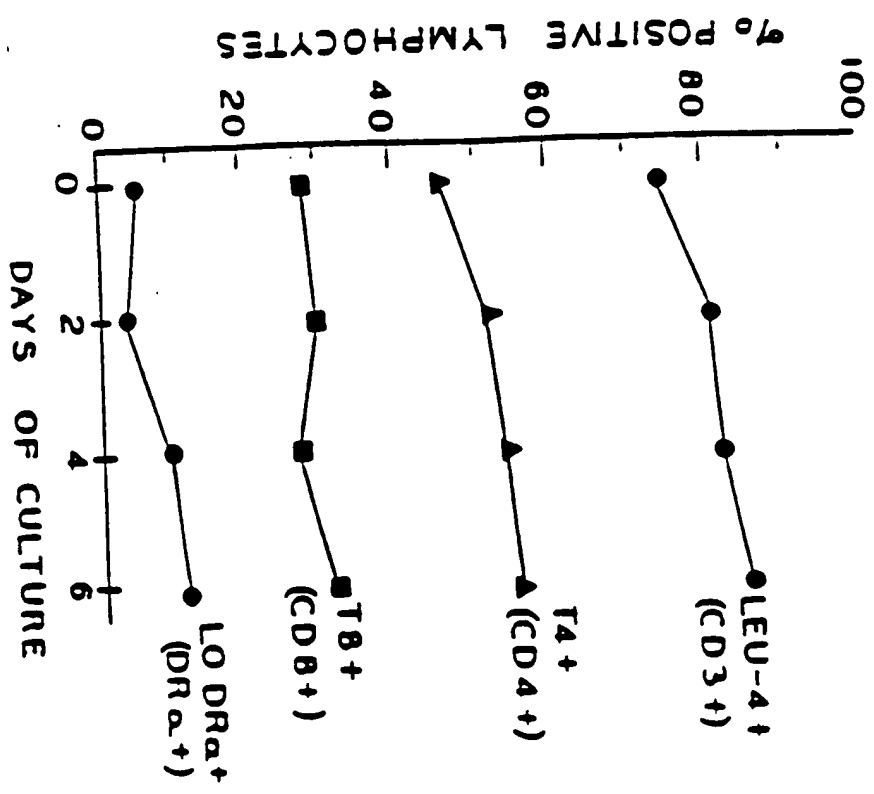


FIG. 3B

PBMC WITH LO-CD2- α

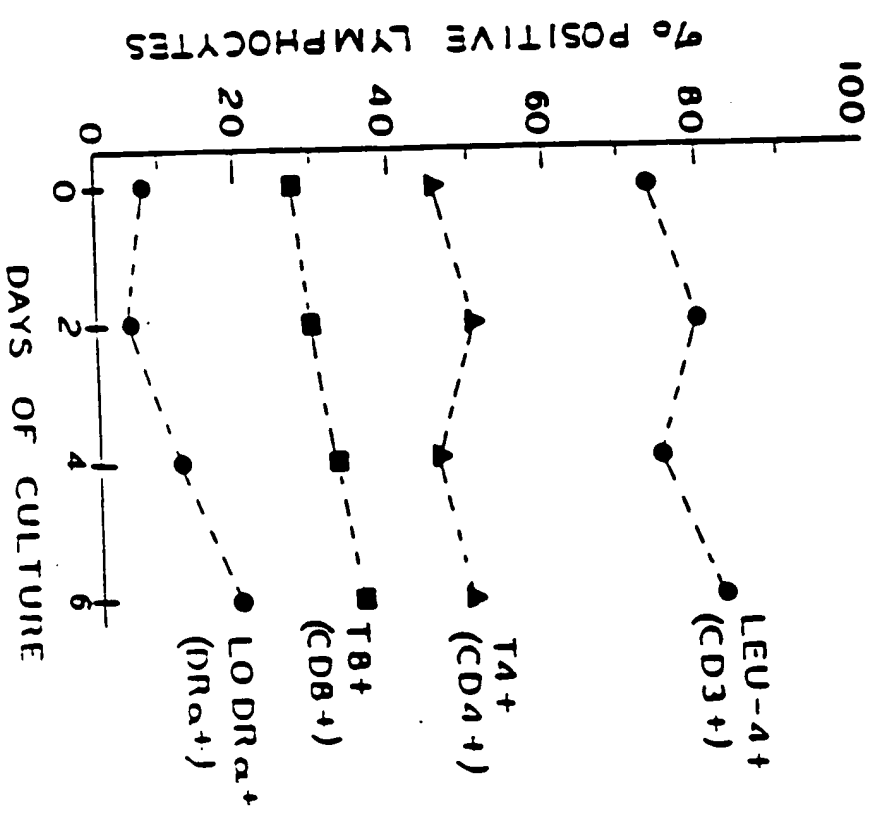
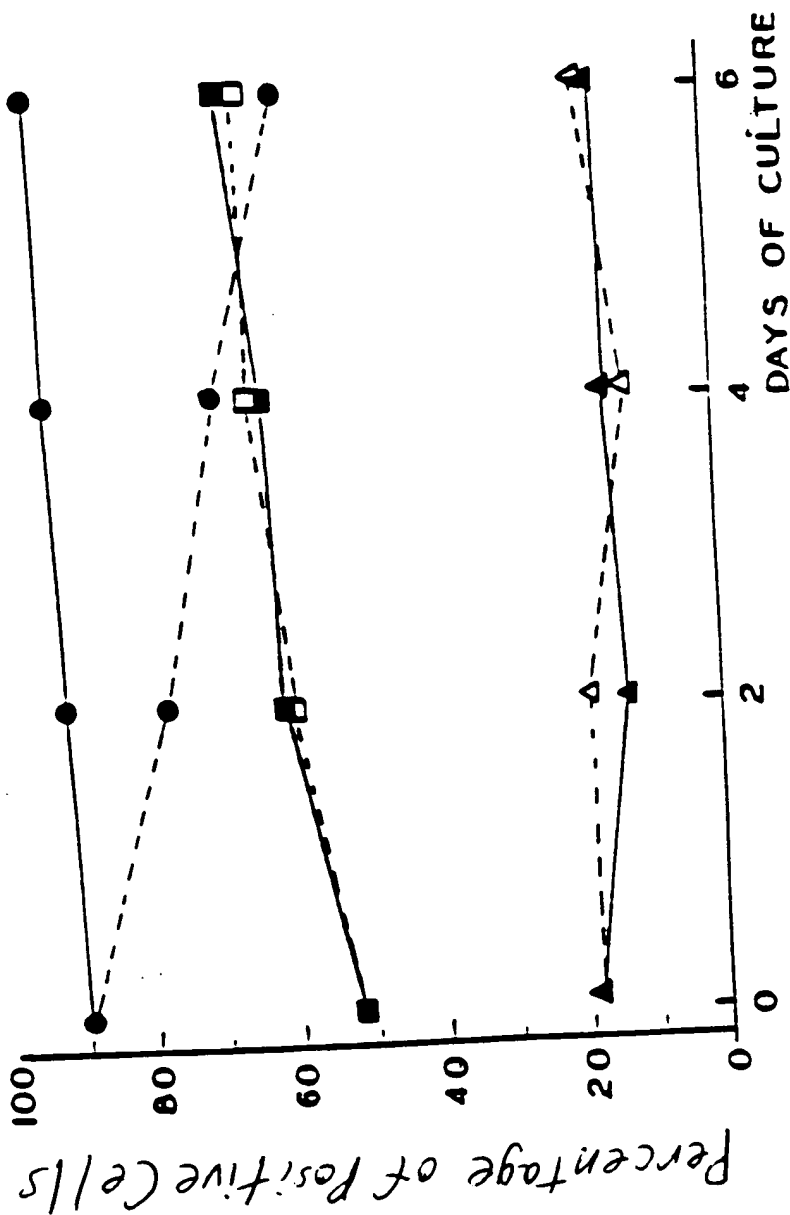


FIG. 4

PBMC: PHENOTYPICAL ANALYSIS



LEU 5b+ (CD2+)

WITHOUT mAb

WITH mAb

T4+ (CD4+)

WITHOUT mAb

WITH mAb

T8+ (CD8+)

WITHOUT mAb

WITH mAb

5/41

6/41

Effects of LO-CD2a on Resting Cells during MLC

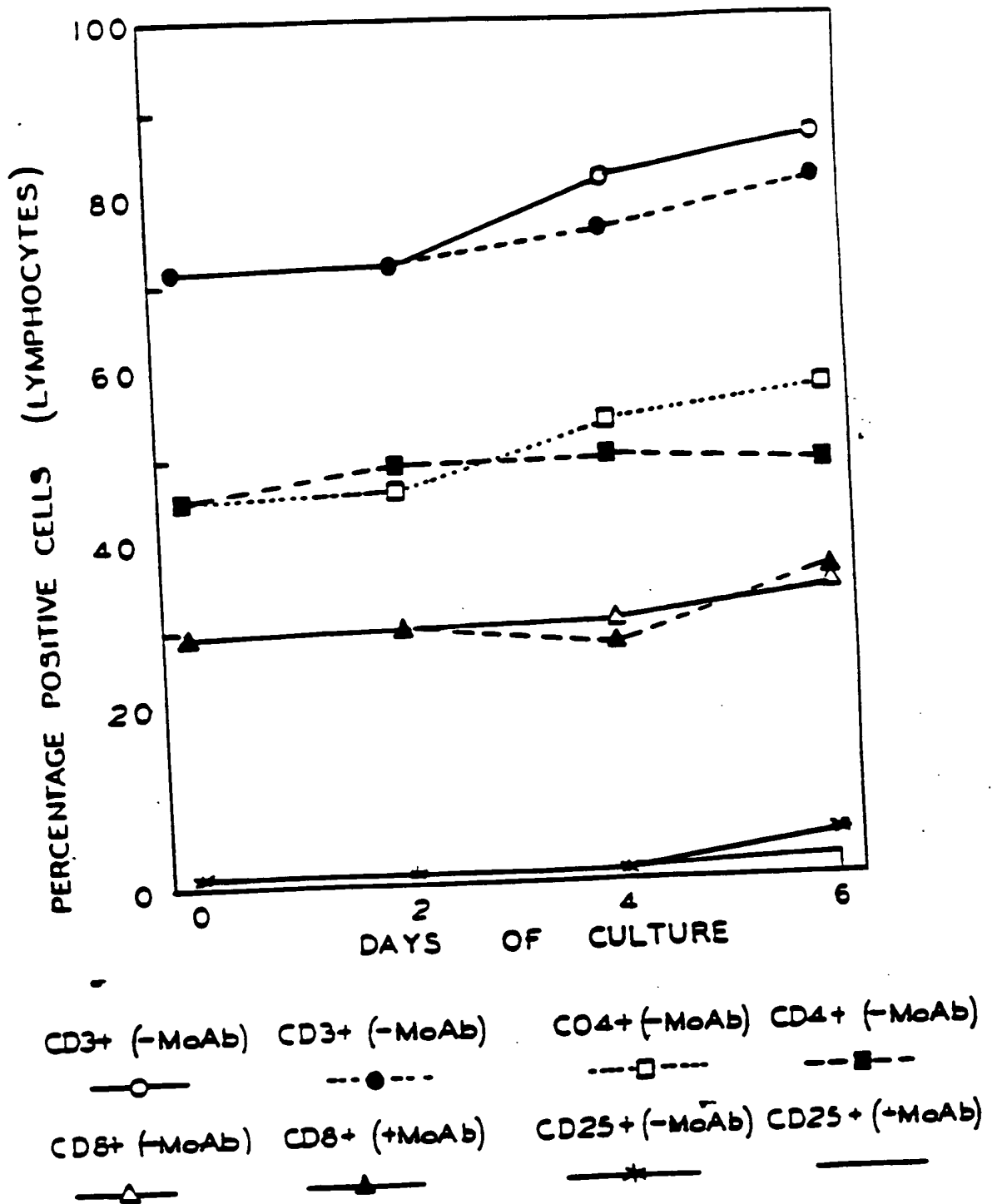


FIG. 8A

862040" 22095060

FIG. 5A

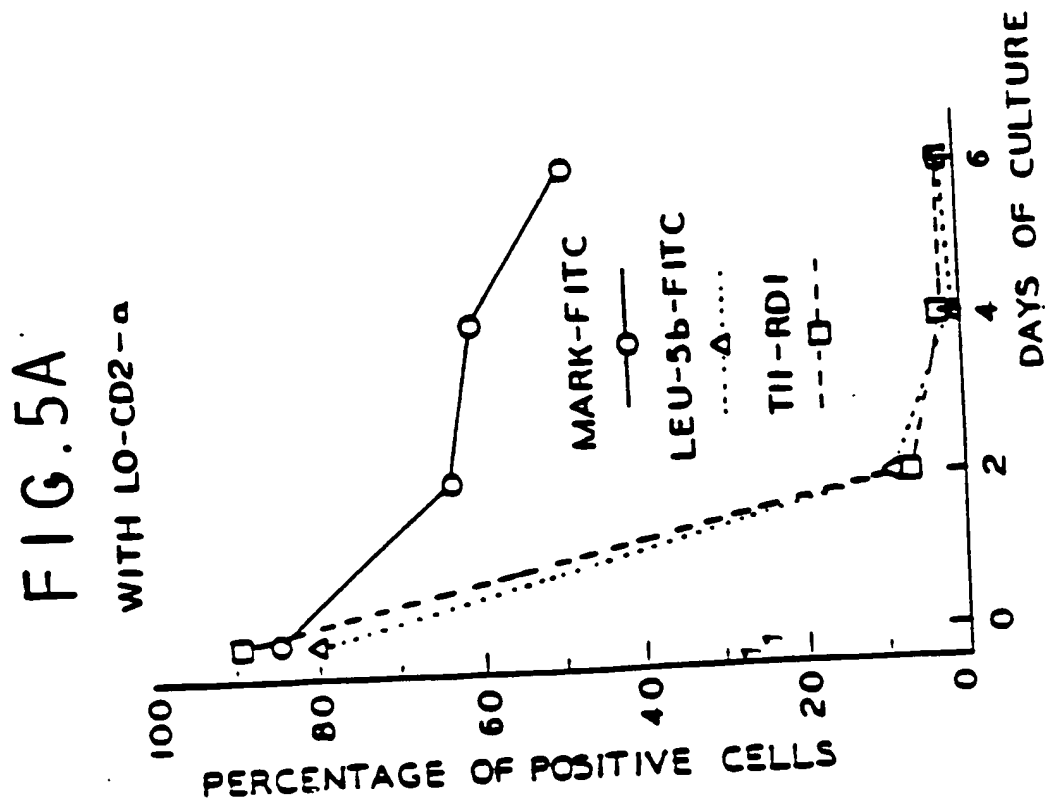
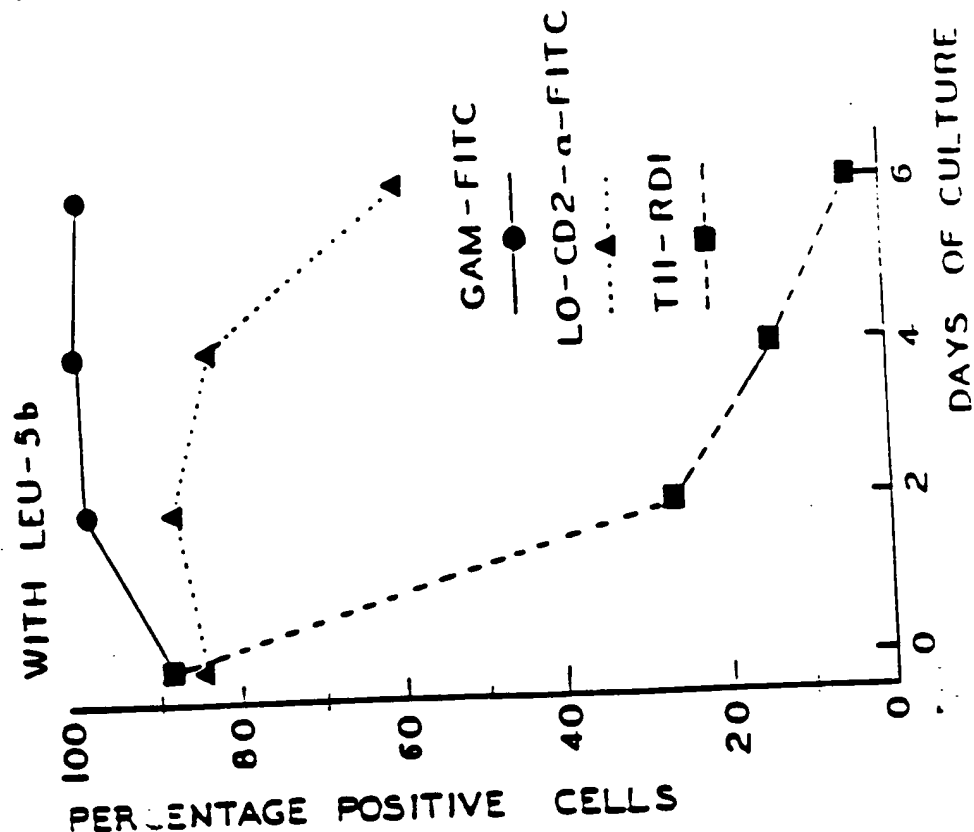


FIG. 5B



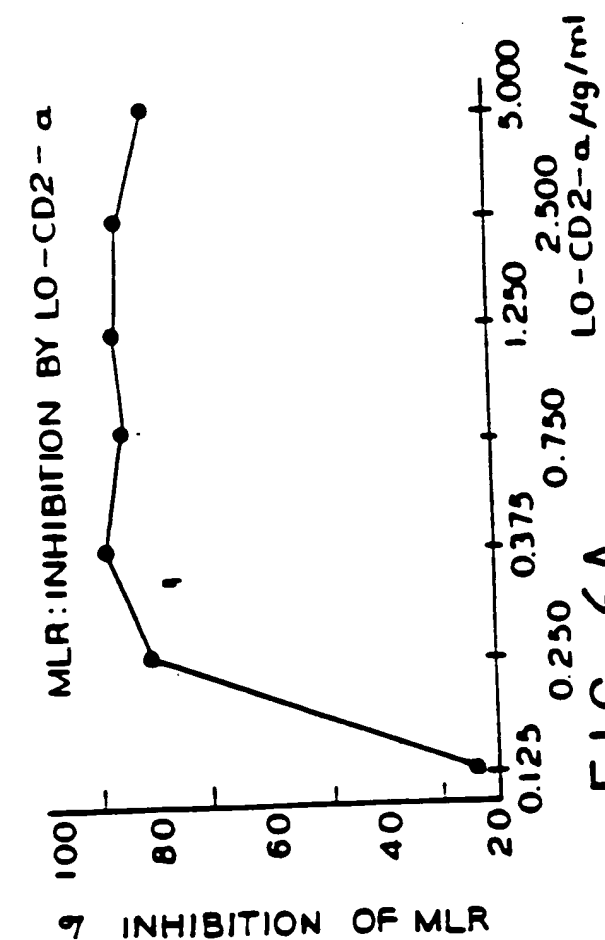


FIG. 6A

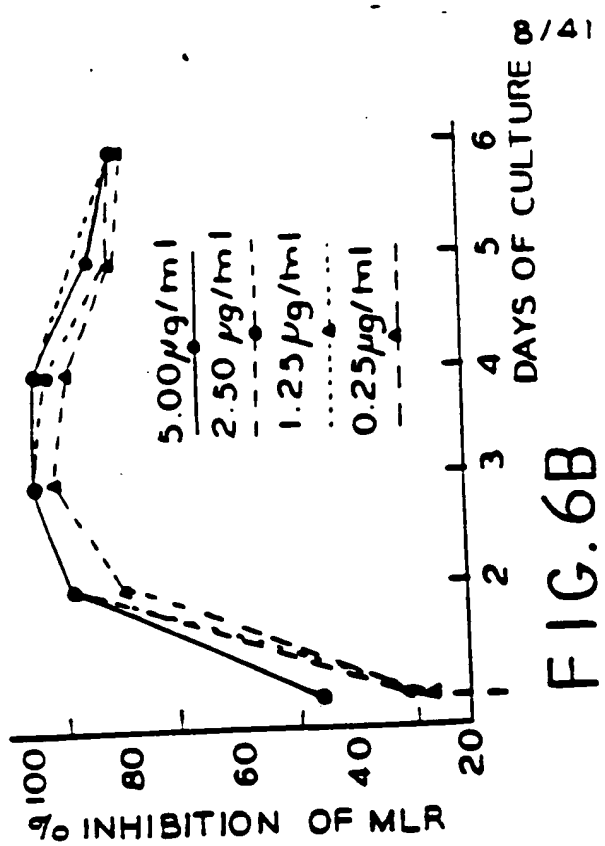


FIG. 6B

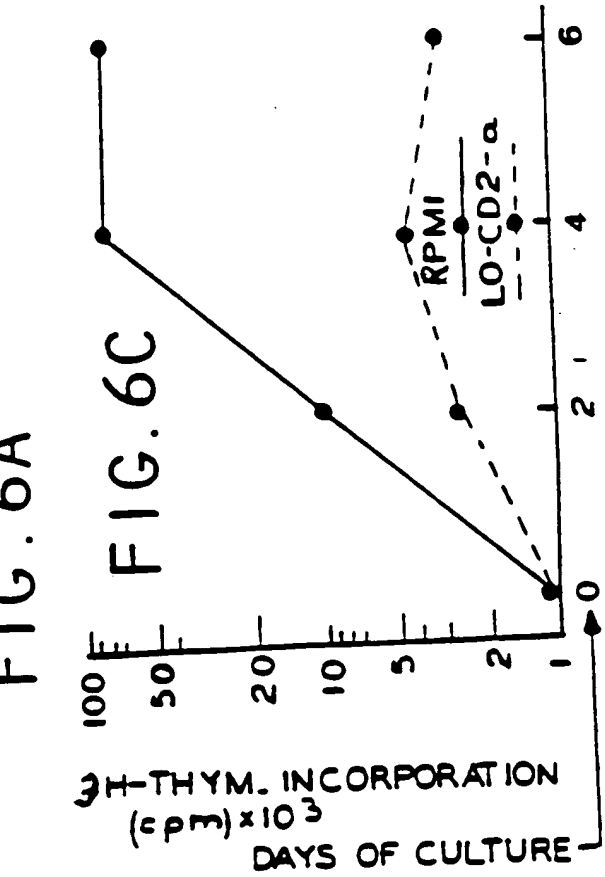


FIG. 6C

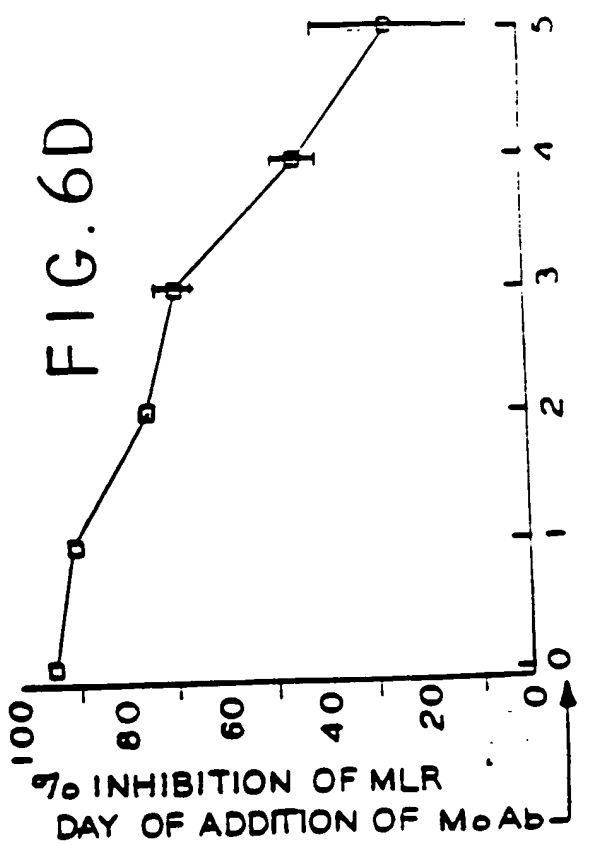


FIG. 6D

9/41

MLC:LEU-5b+ (CD2+) CELLS

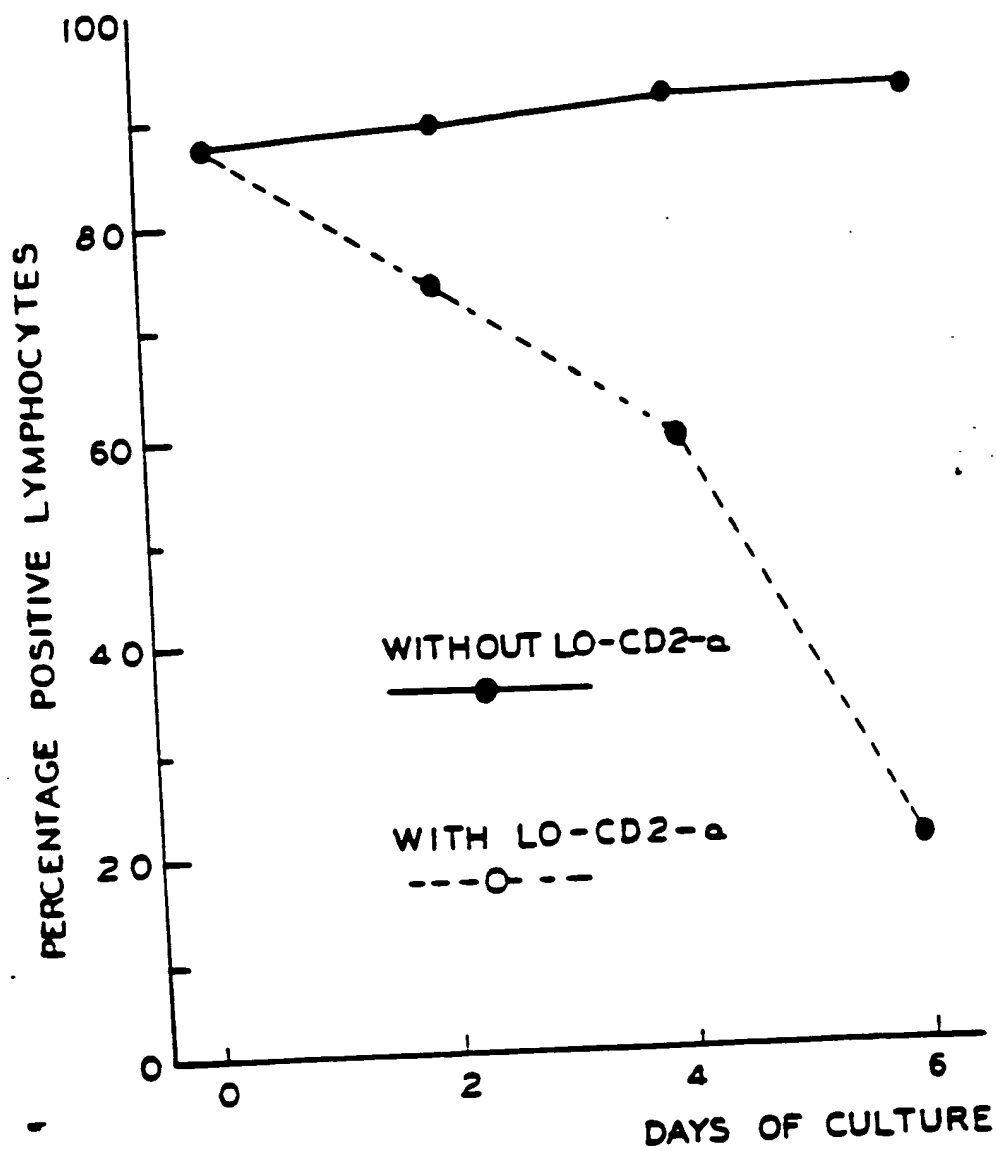


FIG. 8B

862040" 24095060

Number of blast cells per 25,000 events analyzed

FIG. 7

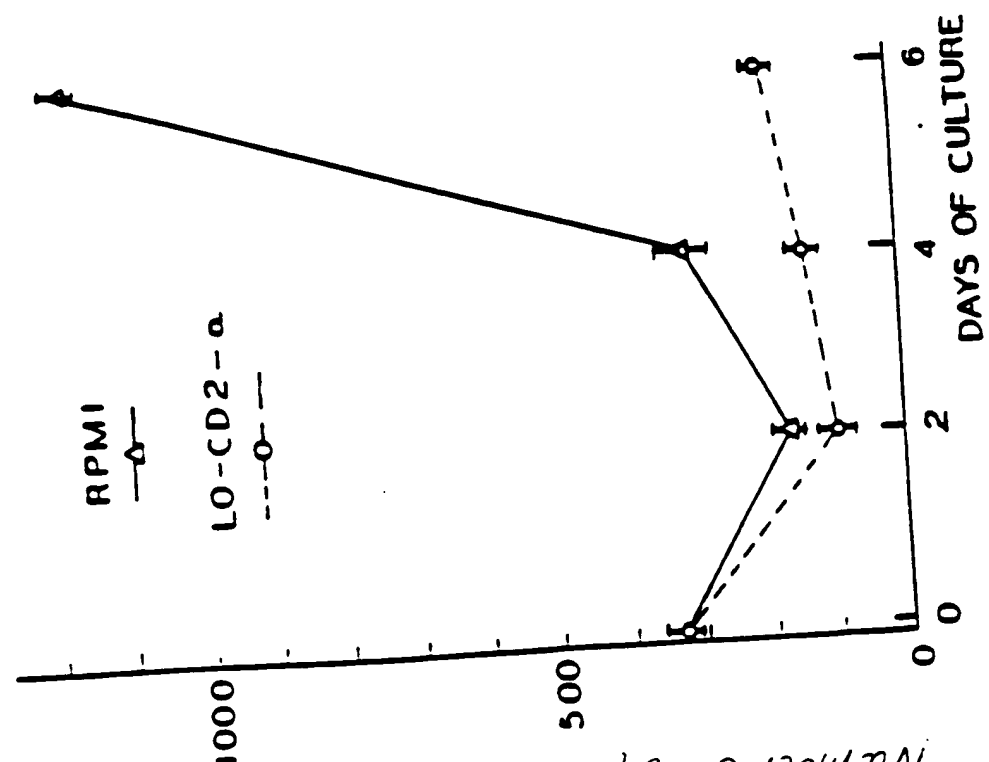
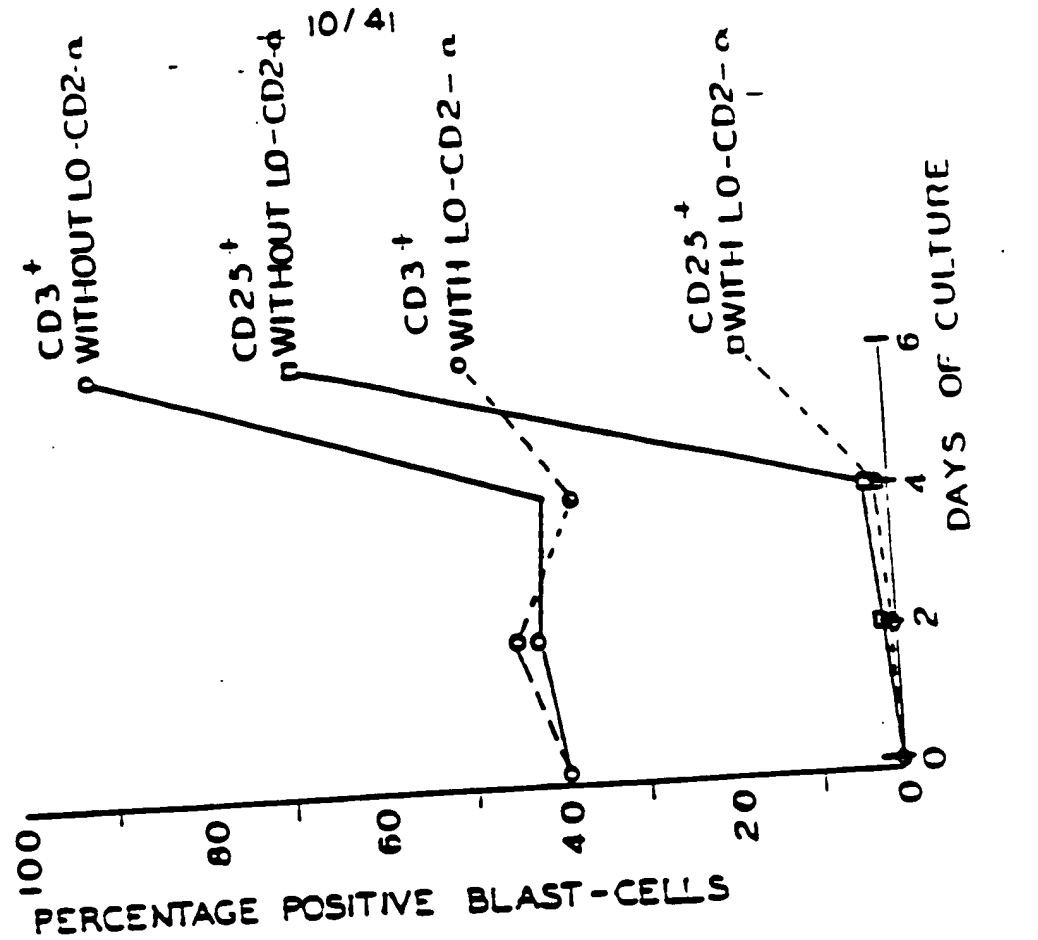
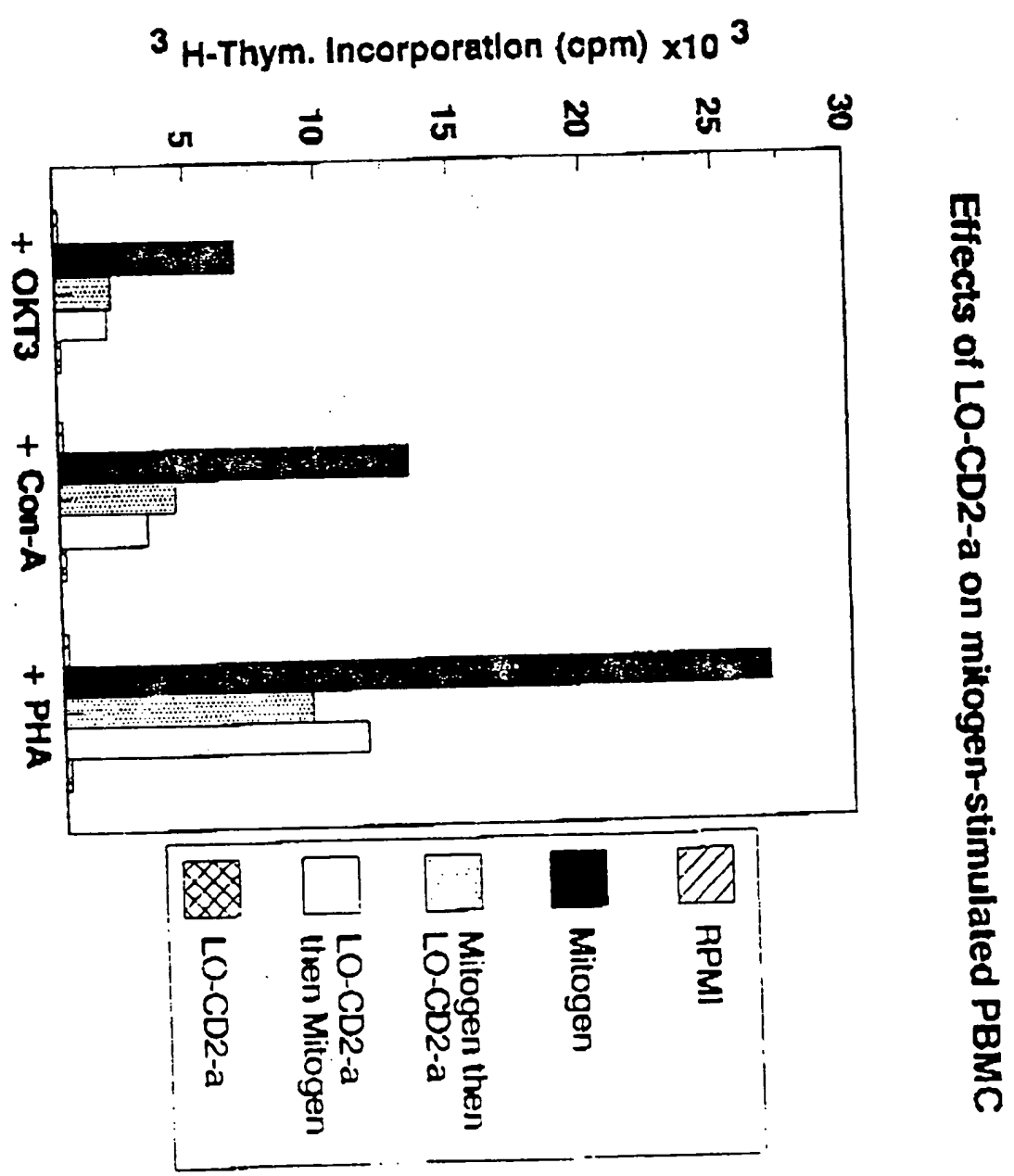


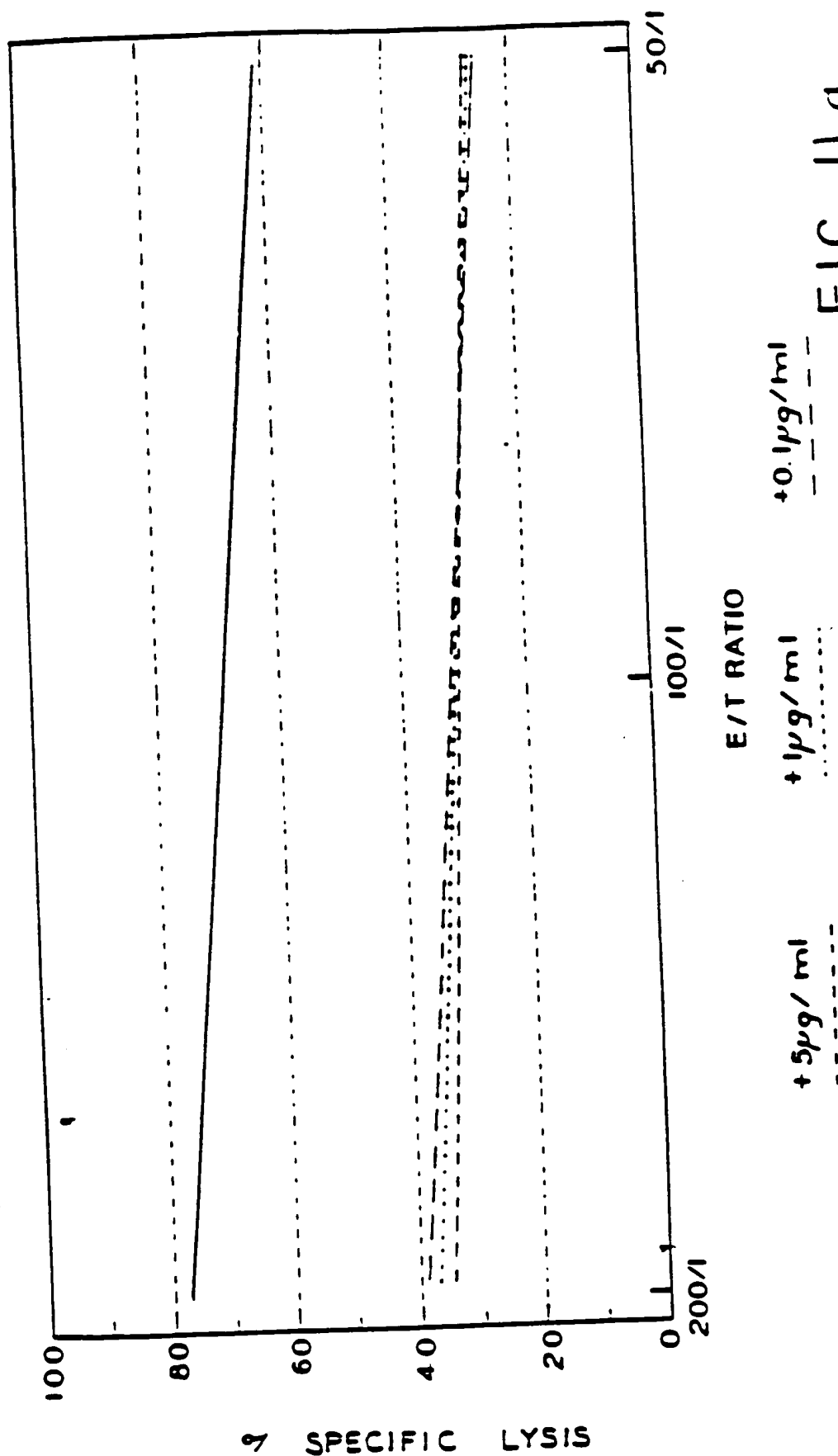
Figure 1a



09056072-040798

862040" 22095060

12 / 41



FIC. 11 d

864040" 22095060

13/41

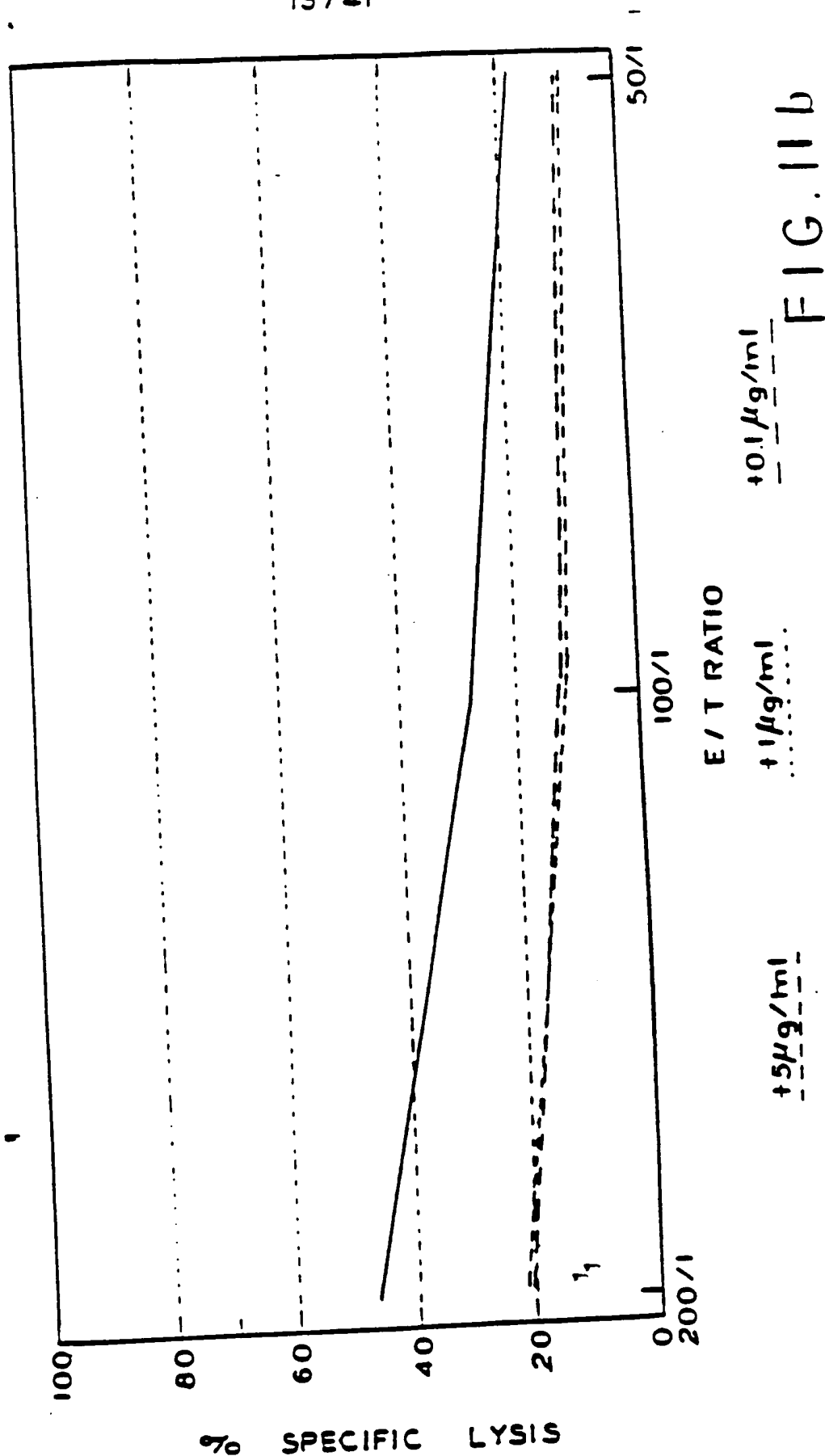


FIG. 11b

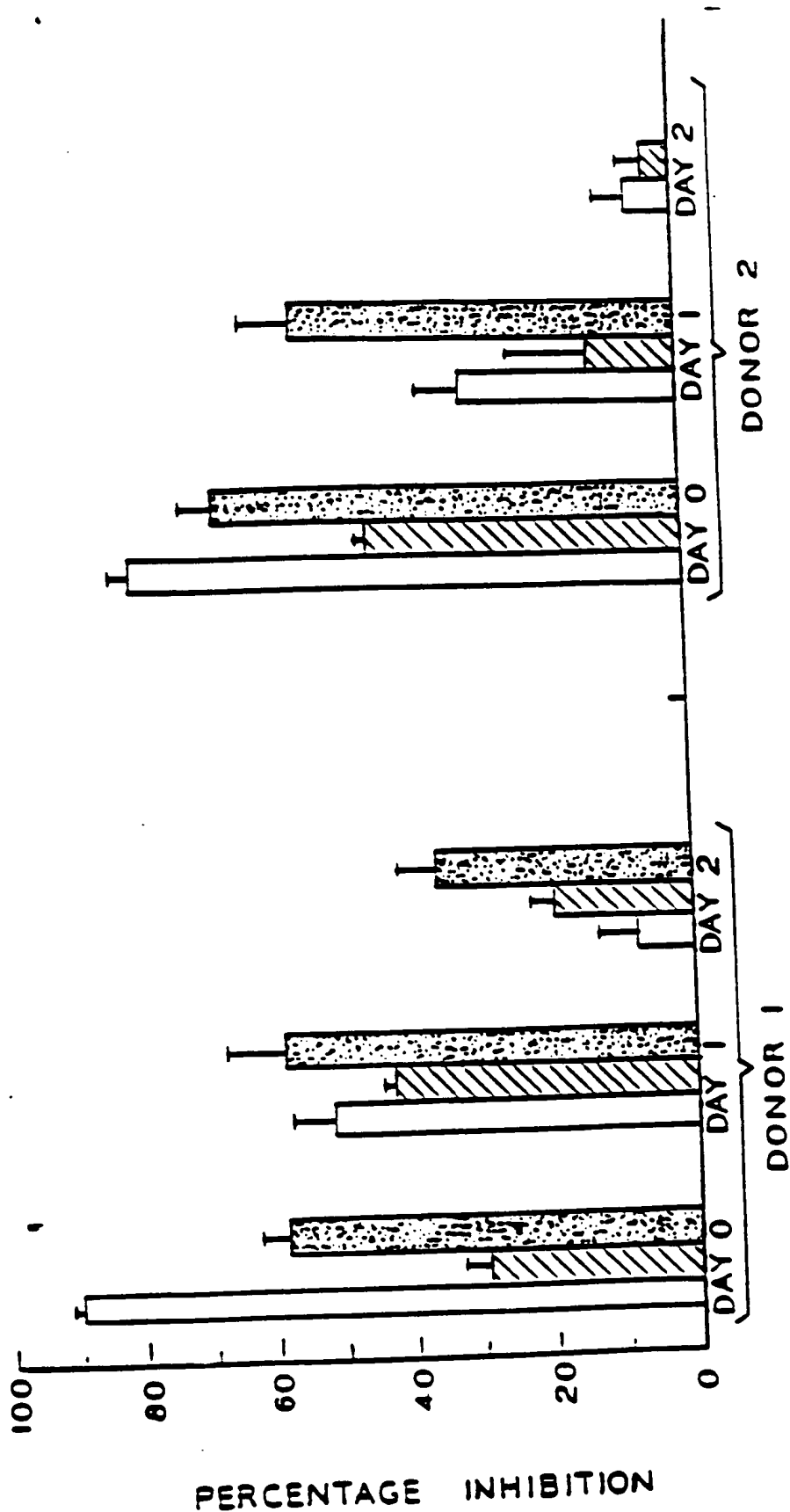


FIG. 10

☐ OKT3
 ☒ PHA
 ☒ CON-A
 MITOGENS ADDED AT DAY 0.

LYMPHOCYTE COUNTS

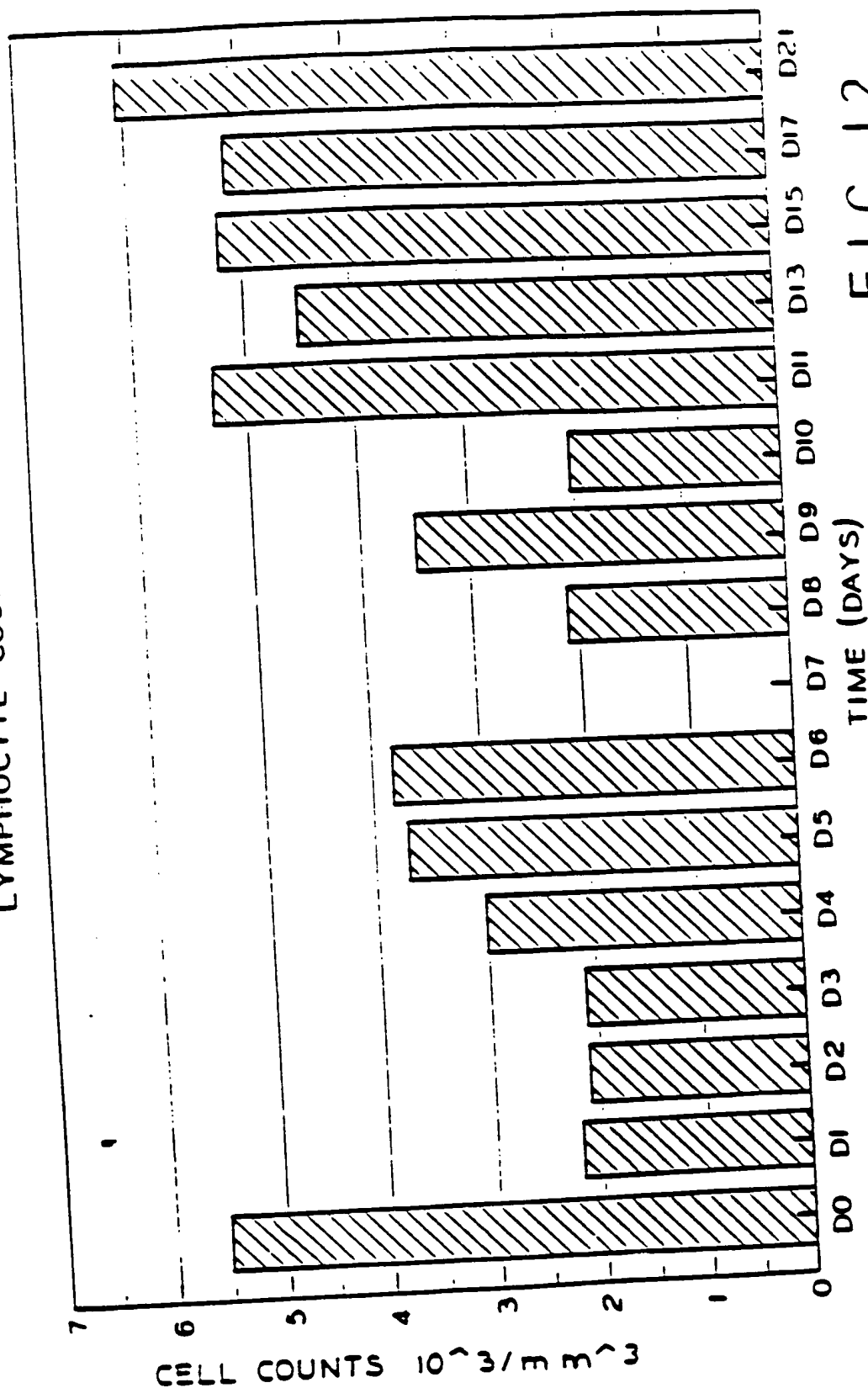


FIG. 12

LOCD2 20mg/DAY
D0-D9

CELL POPULATIONS FIG. 13
 LOCD2: 20mg/DAY
 D0-D9

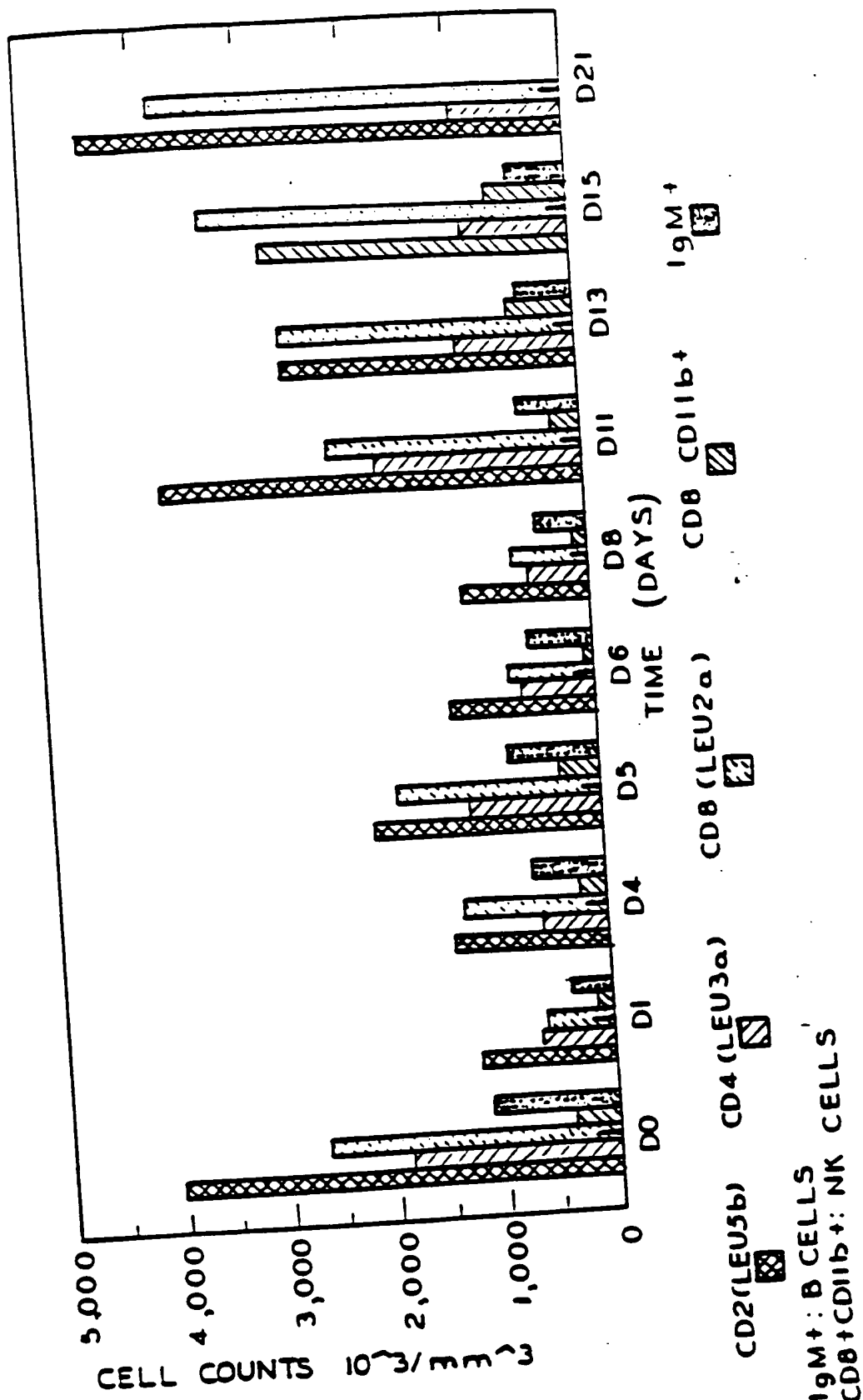
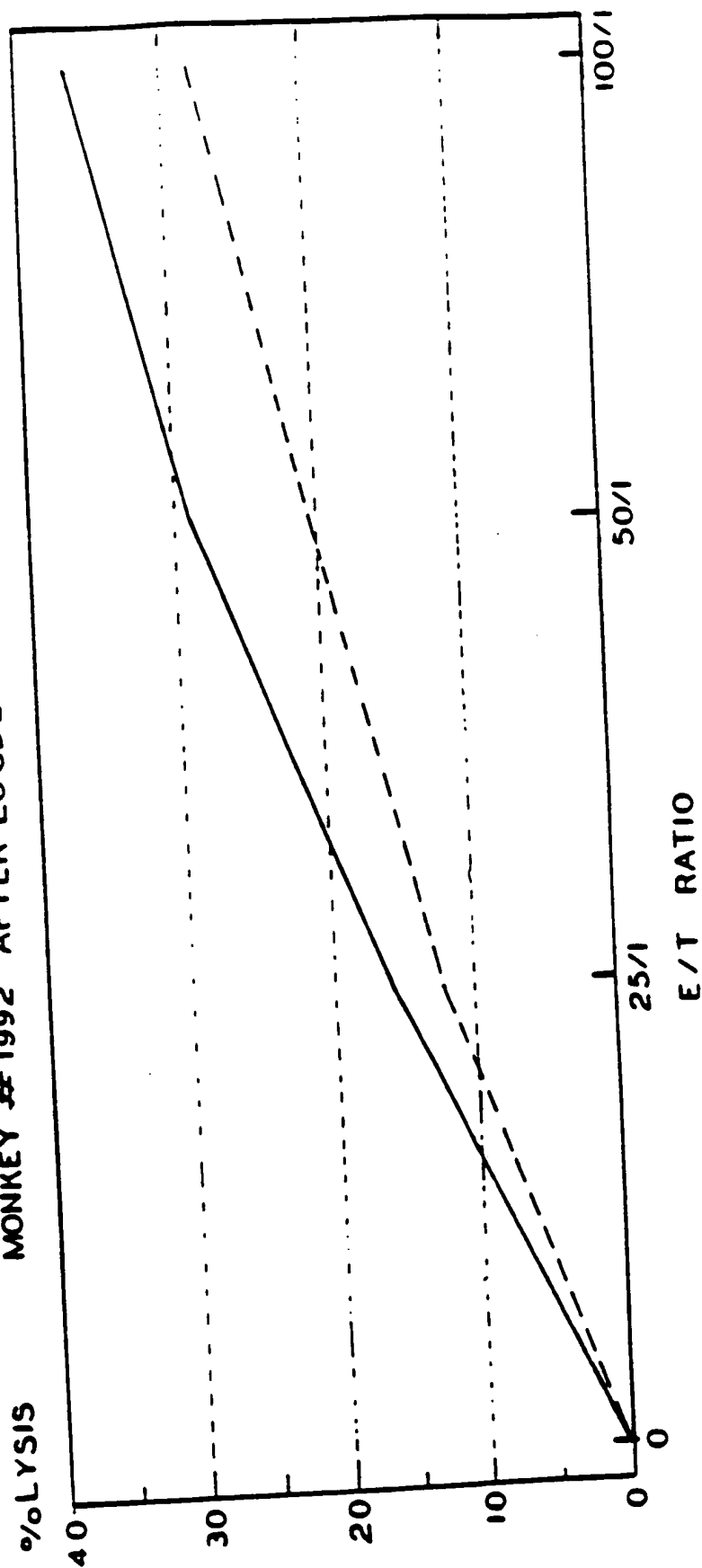


FIG. 14

NK ACTIVITY

MONKEY #1992 AFTER LOCD2 10 DAYS



DAY 22 DAY 11

LOCD2- α SERUM CONCENTRATION
CYNOMOLGUS MONKEY 1992

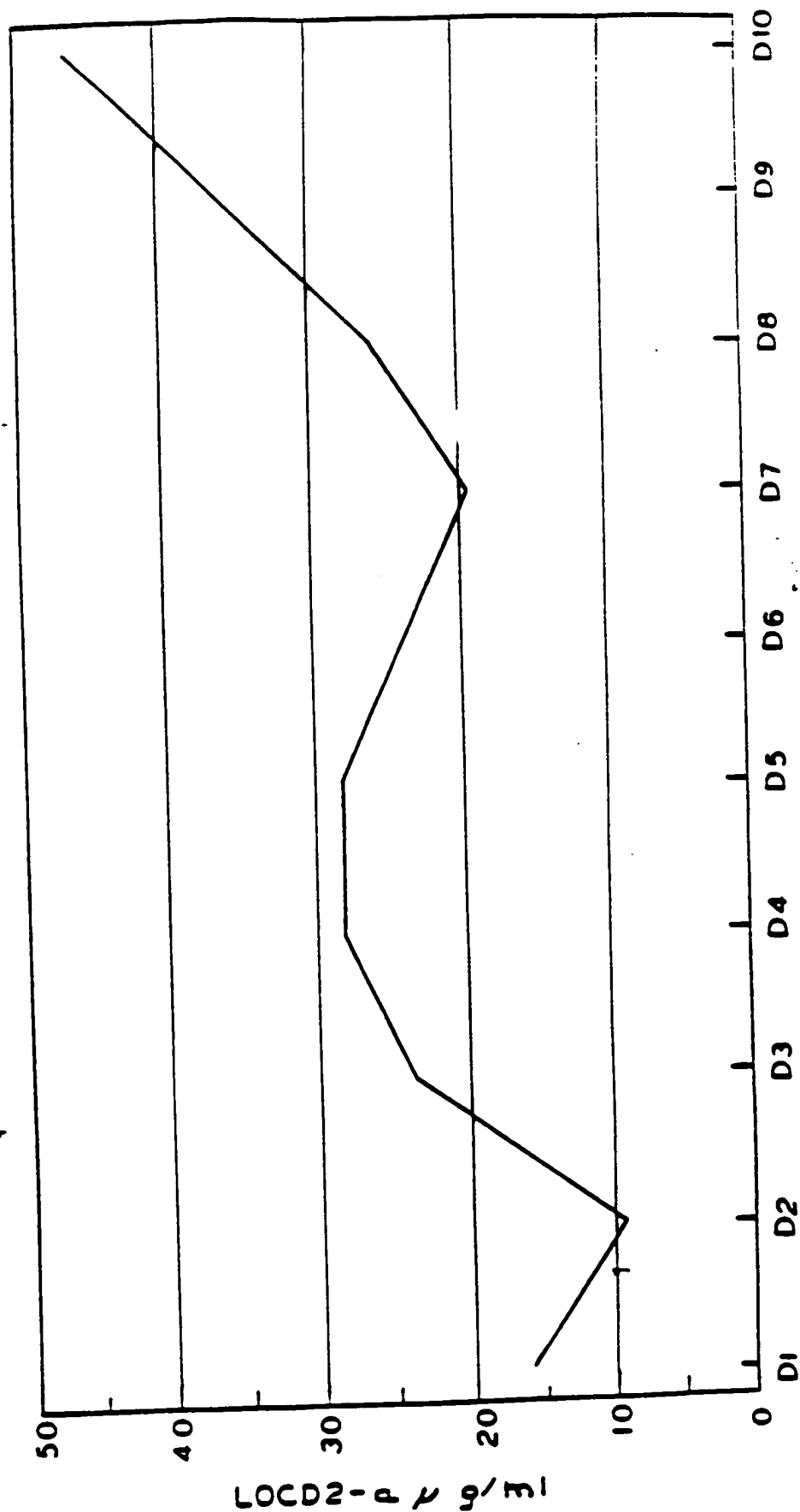


FIG. 15

FIG. 16

19G ANTIBODY ANTI-LOCD2a
CYNOMOLGUS MONKEY

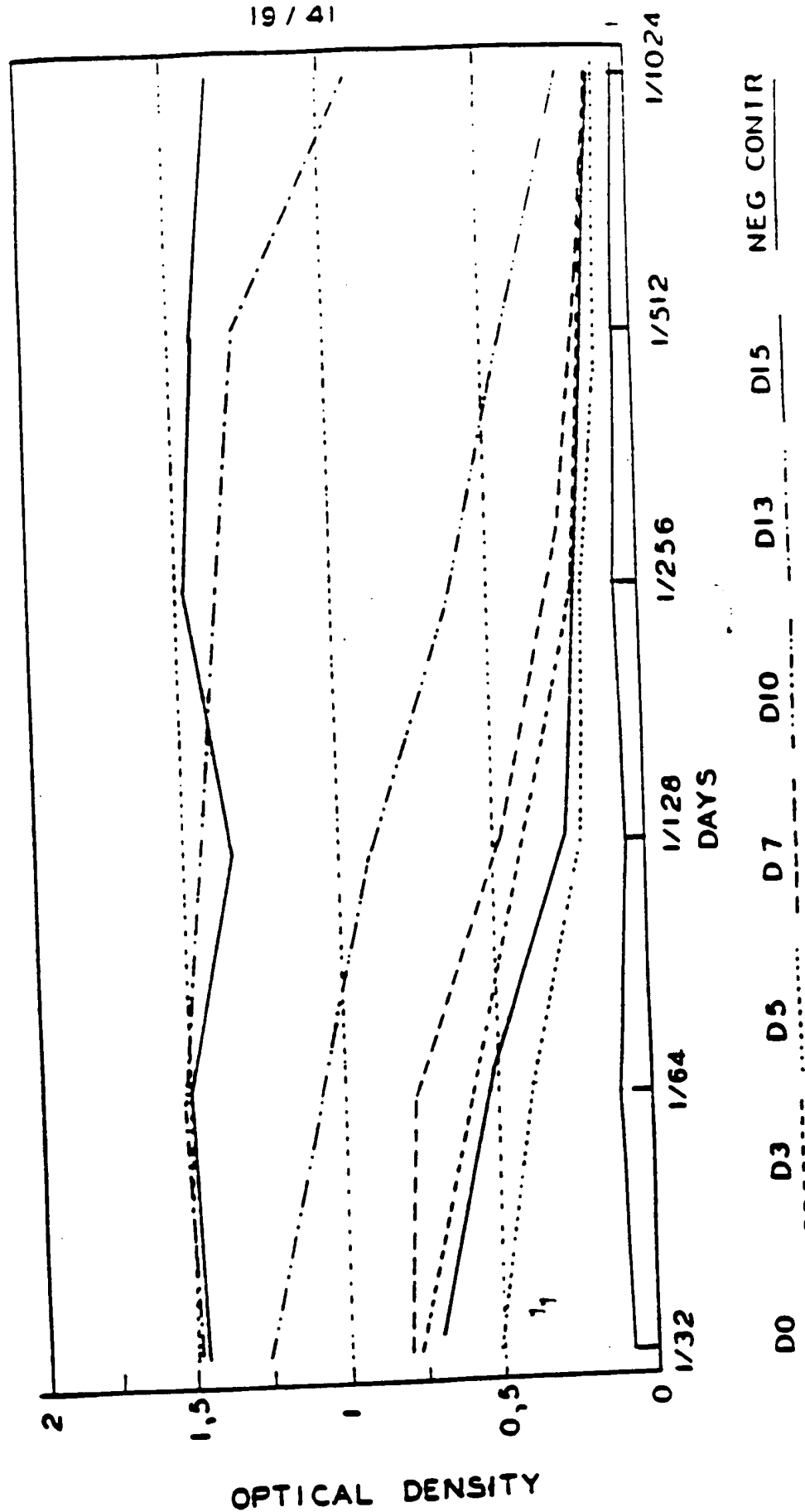


FIG. 17B
LO-CD2- α : SERIC DOSAGES

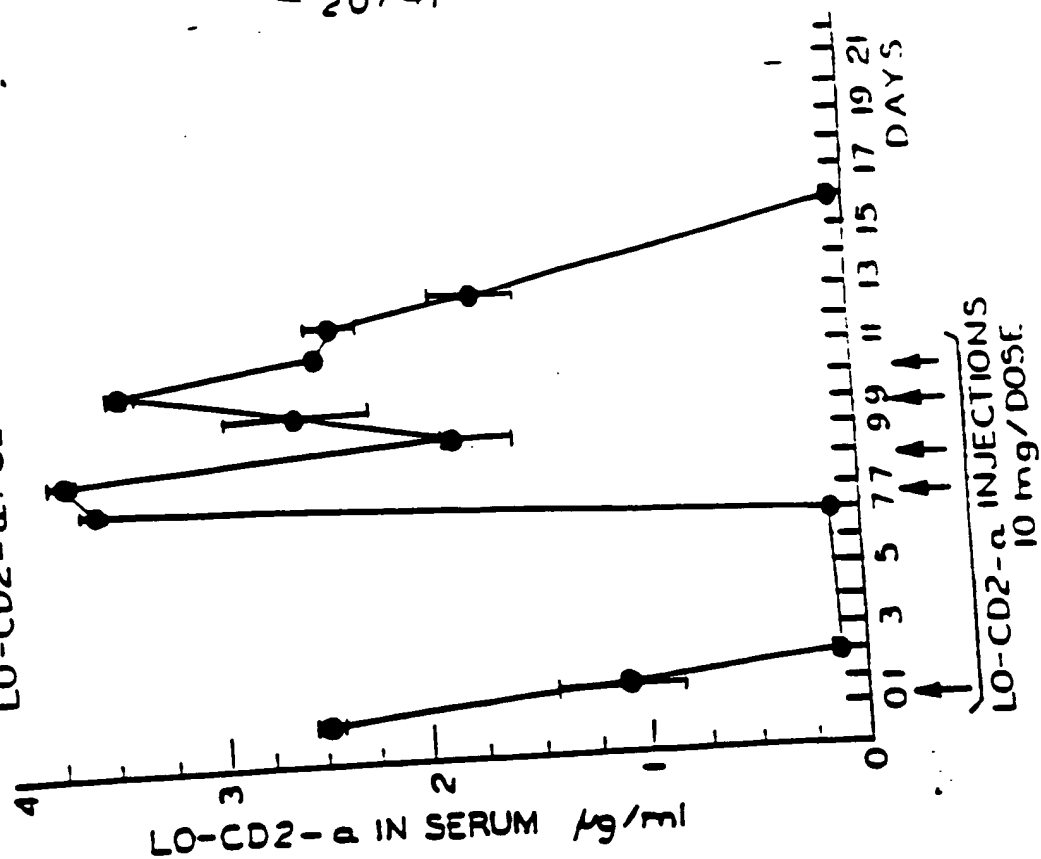


FIG. 17A
PHENOTYPICAL MARKERS

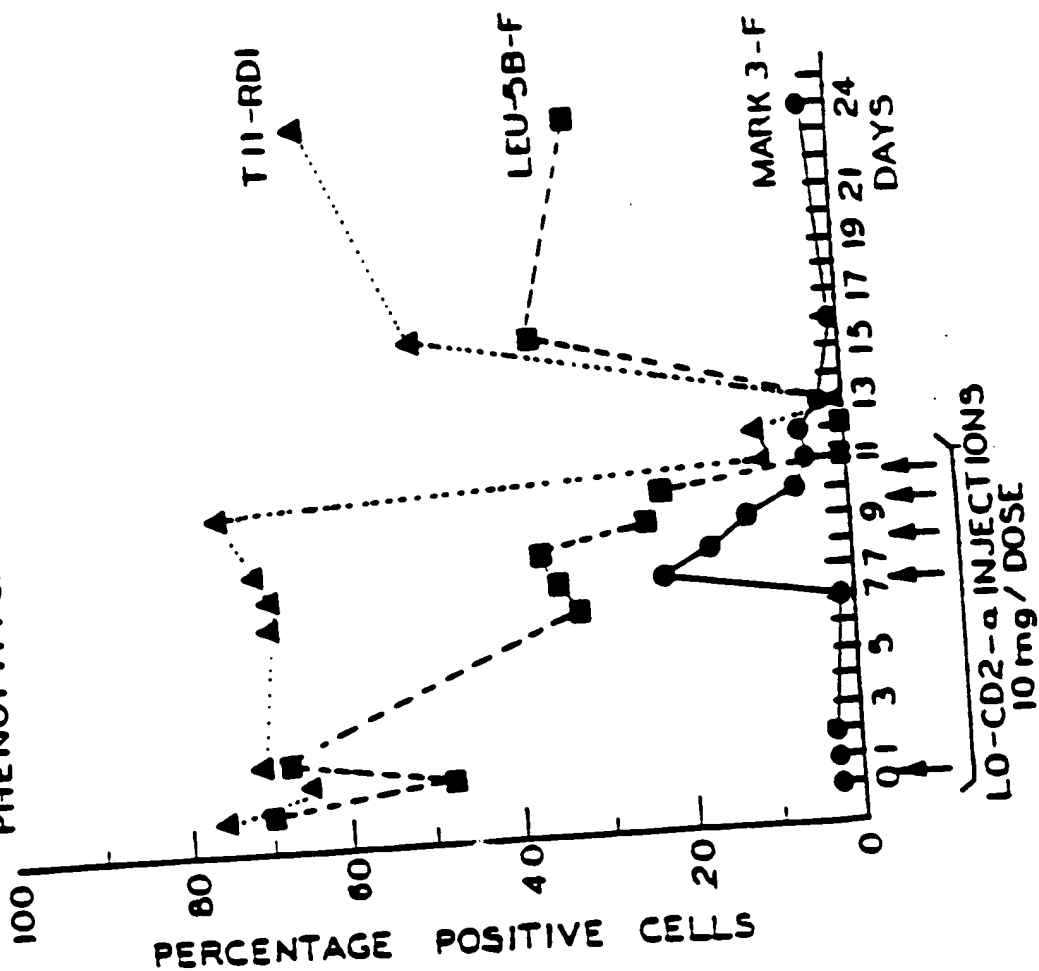


FIG. 18A

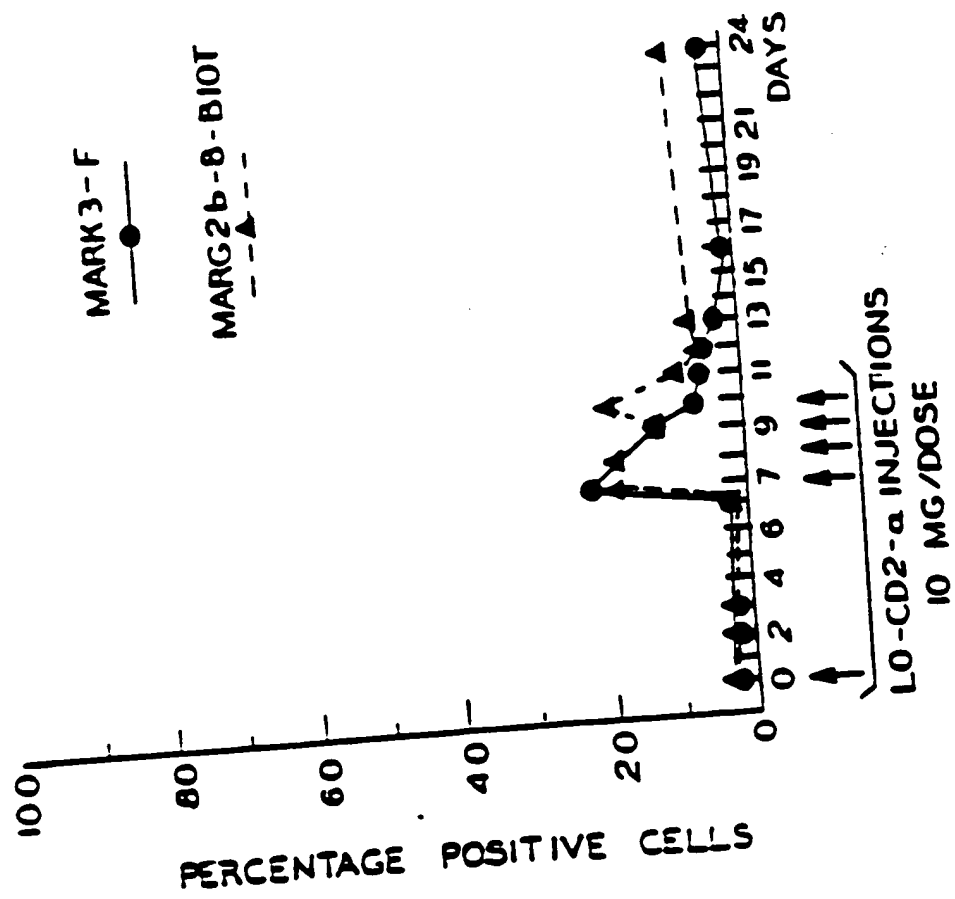


FIG. 18B

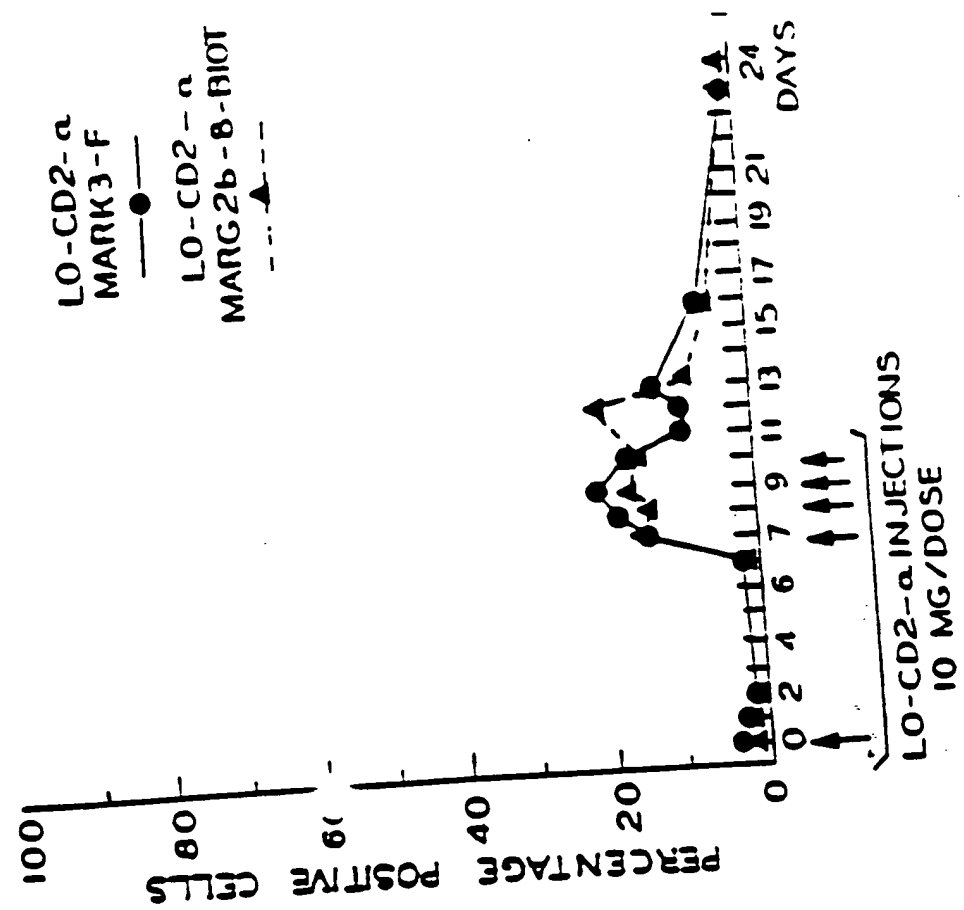
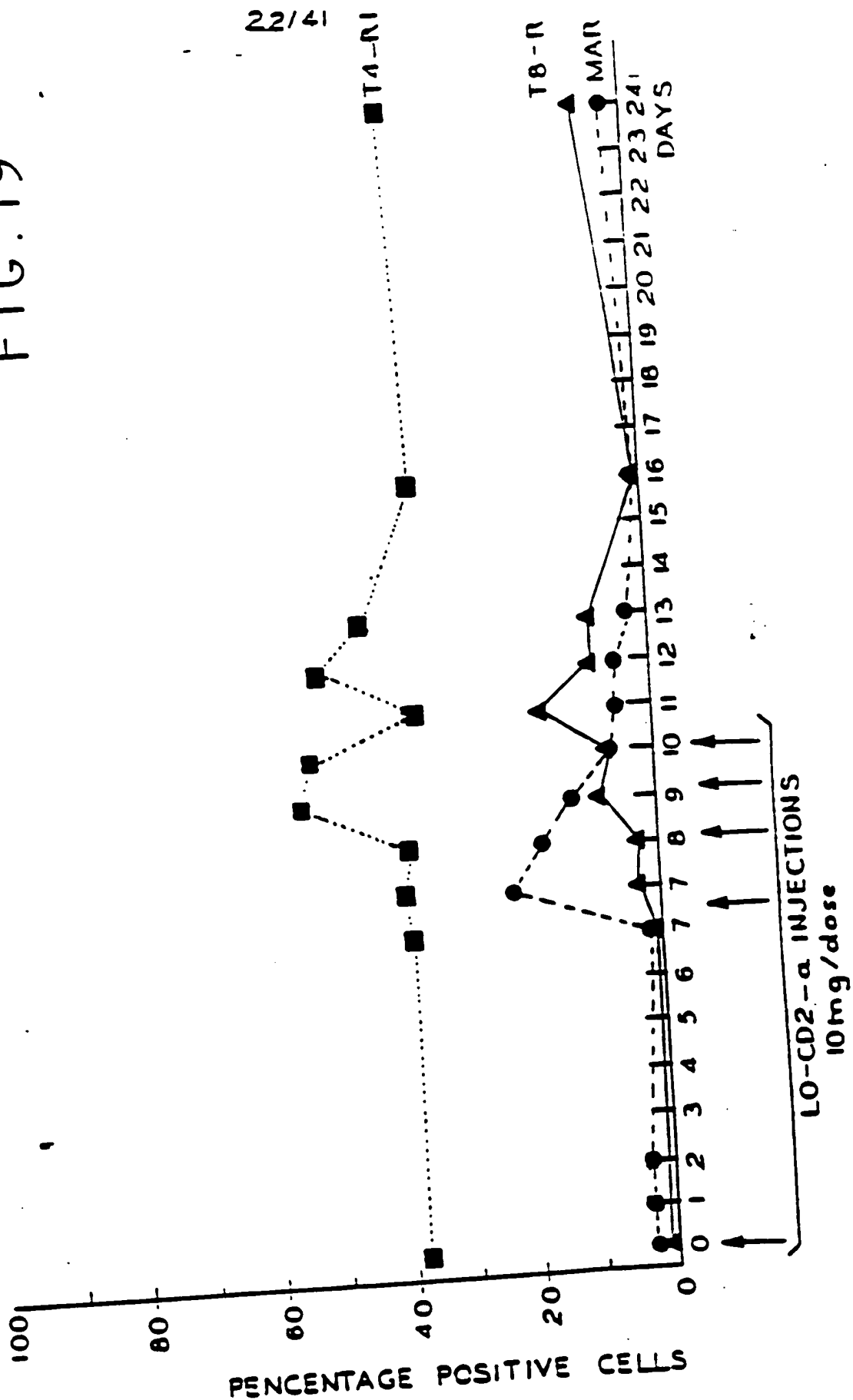


FIG. 19



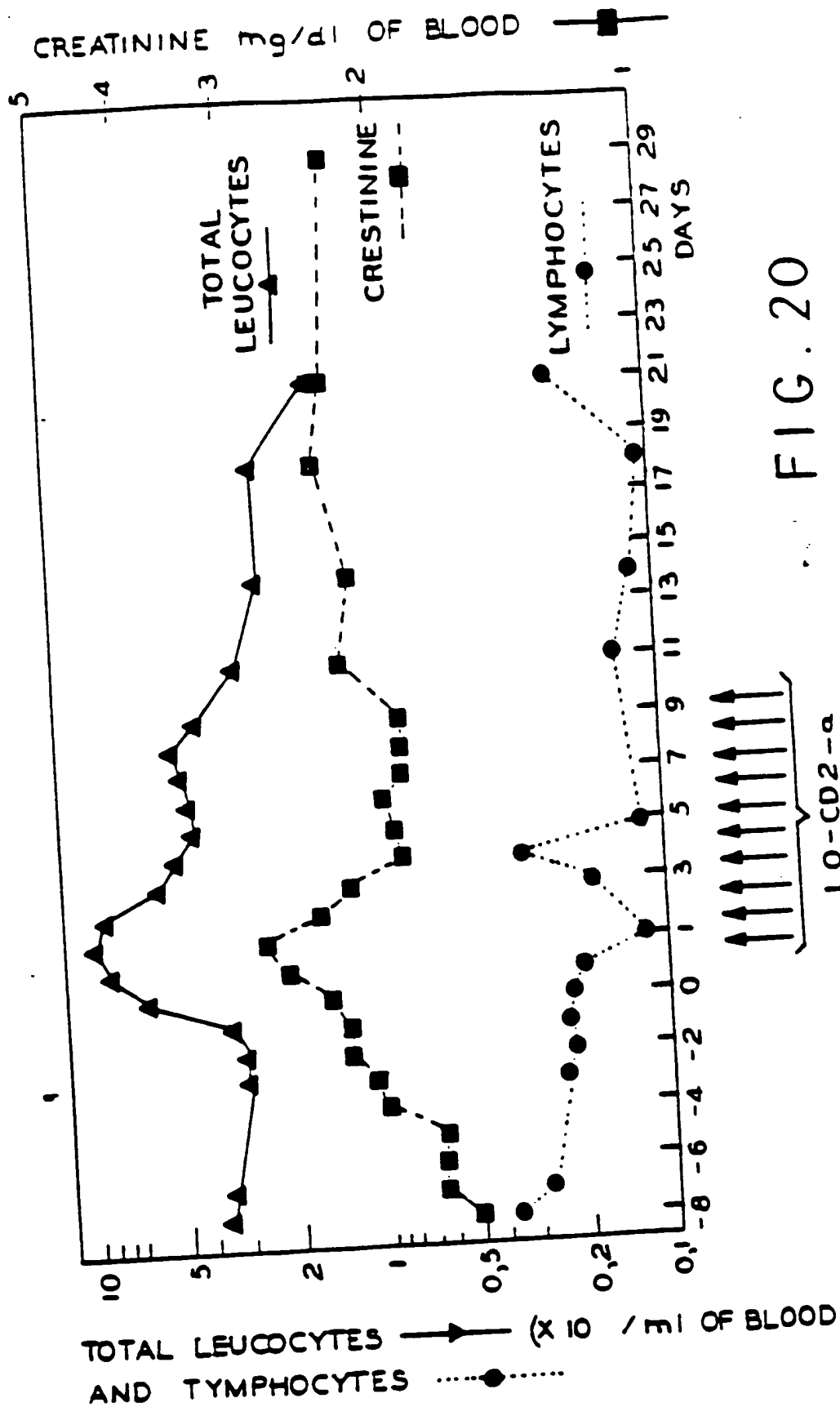


FIG. 20

LO-CD2- α IN KIDNEY ALLOGRAFT REJECTION

FIG. 21

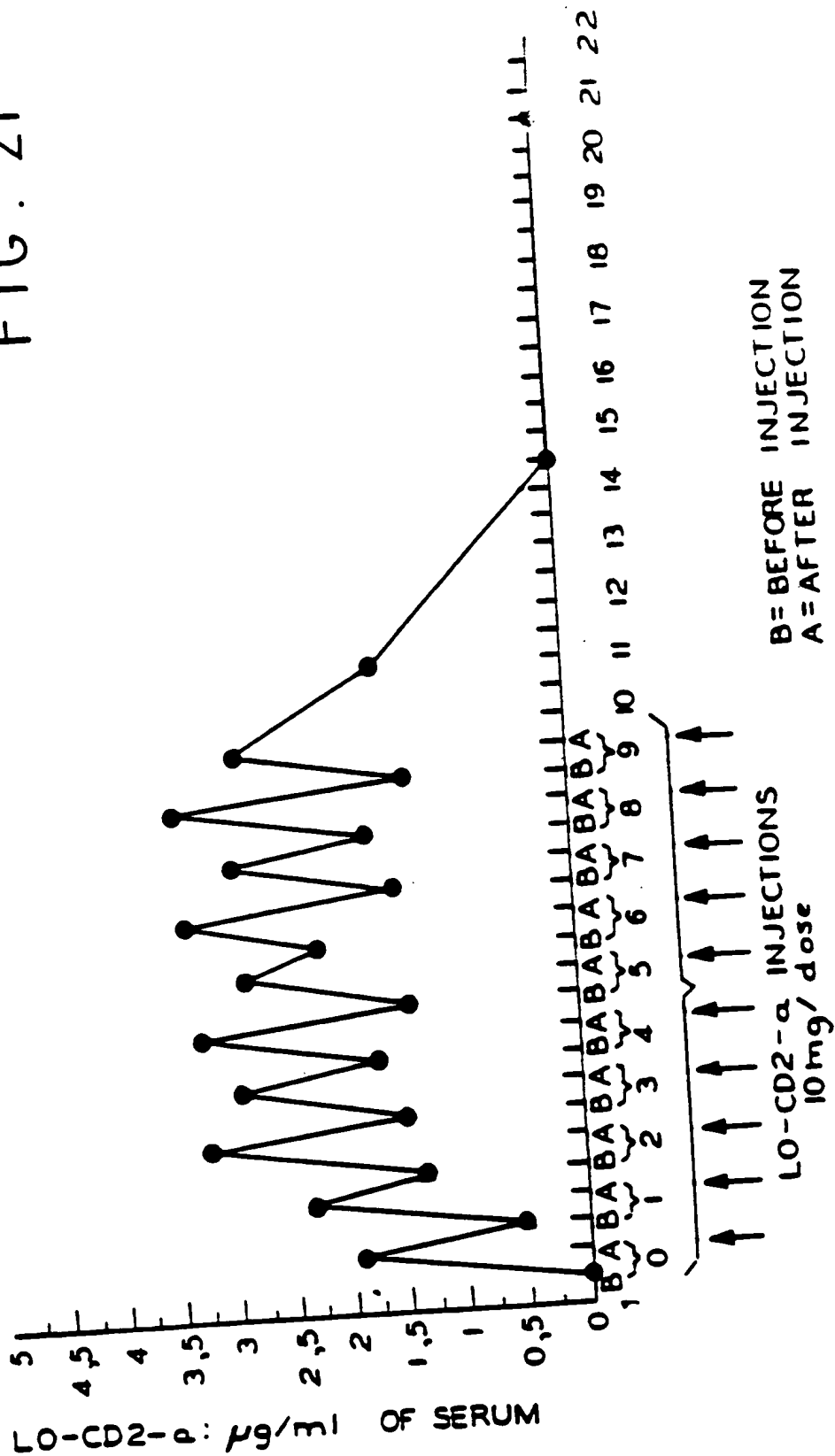
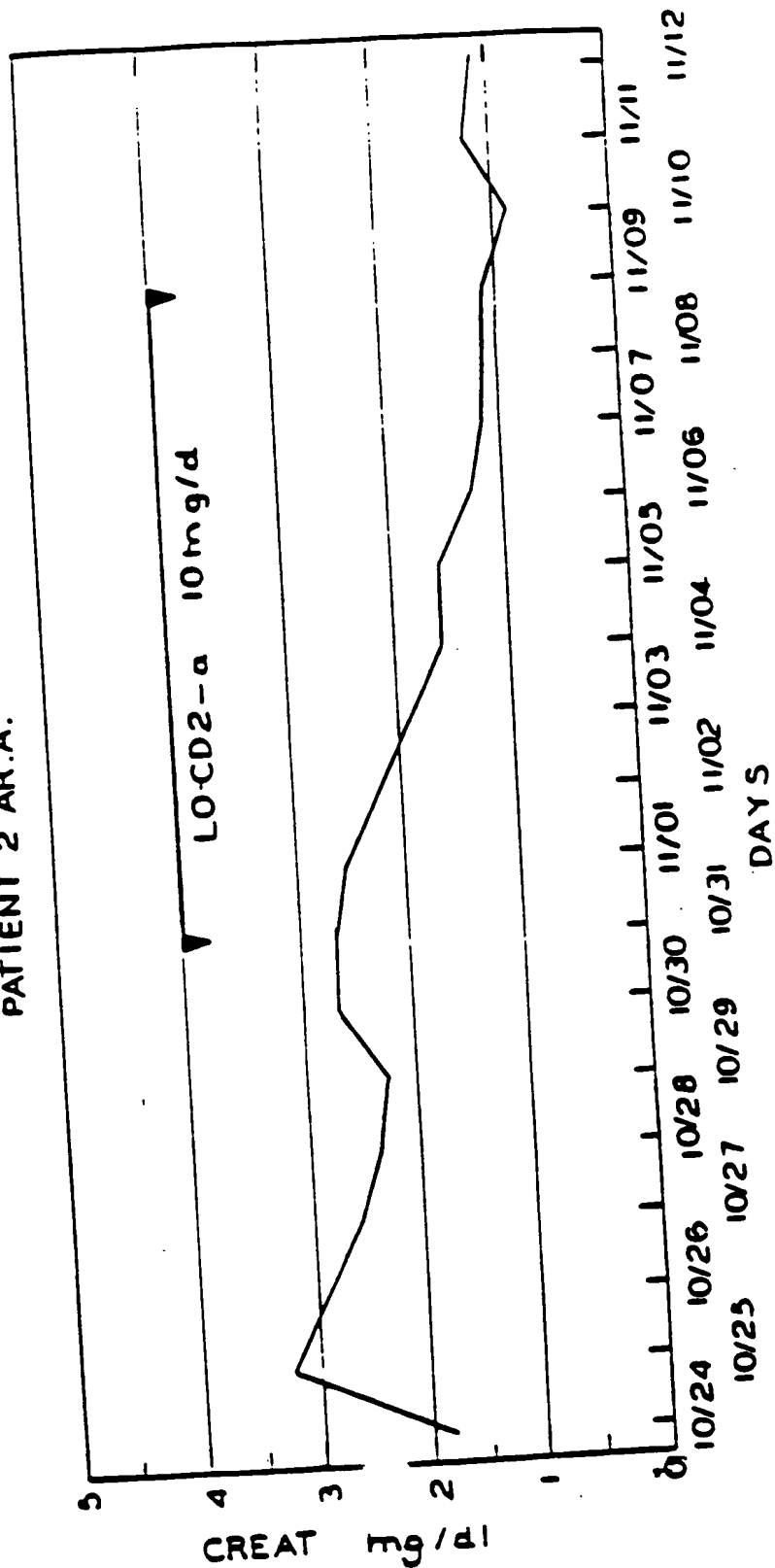


FIG. 22

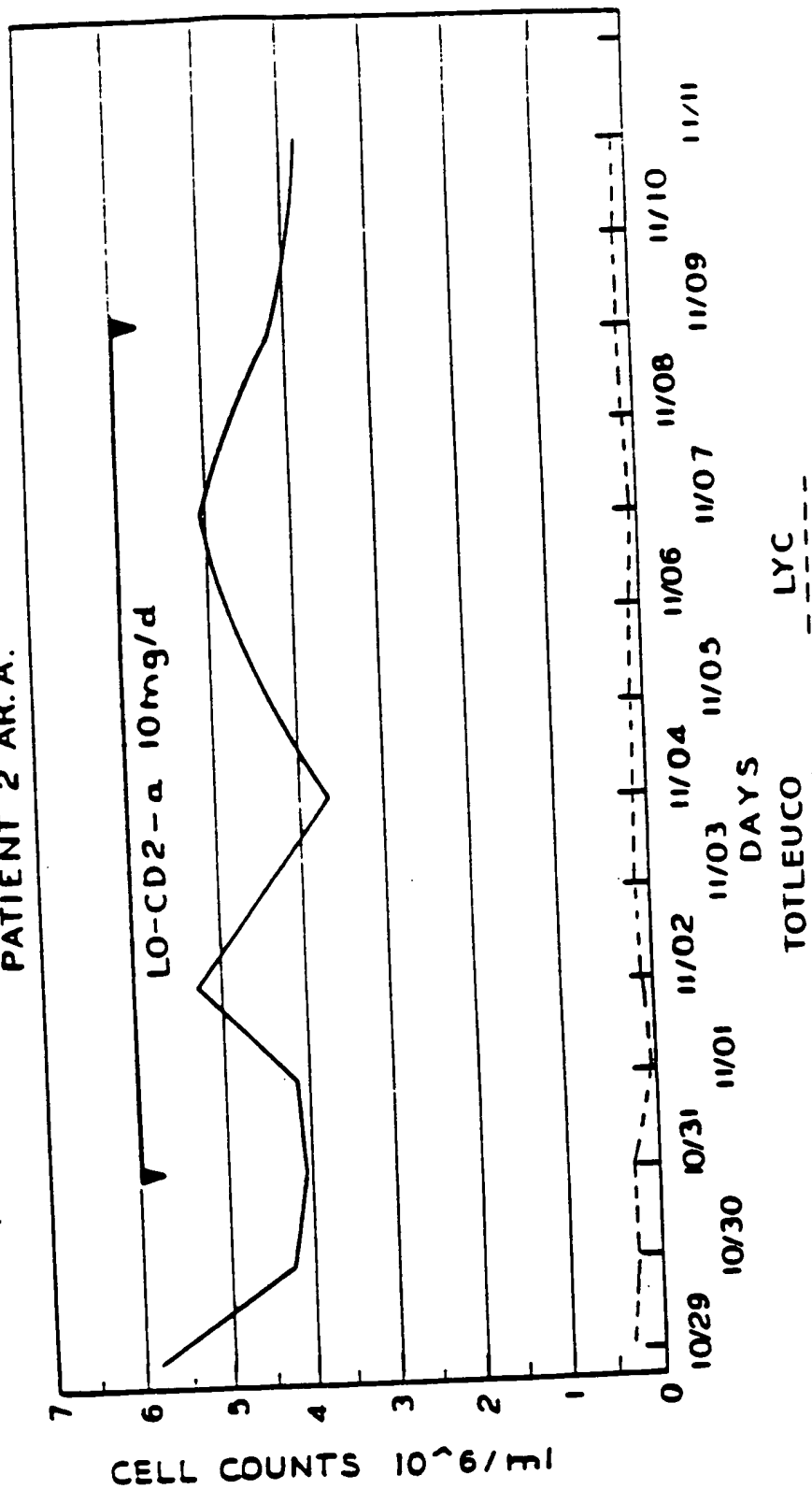
CREATININ VALUES
PATIENT 2 AR.A.



CREAT

FIG. 23

LEUCOCYTE COUNTS
PATIENT 2 AR.A.



LO-CD2- α IN KIDNEY ALLOGRAFT REJECTION
PATIENT 2 (A. A.)

FIG. 24

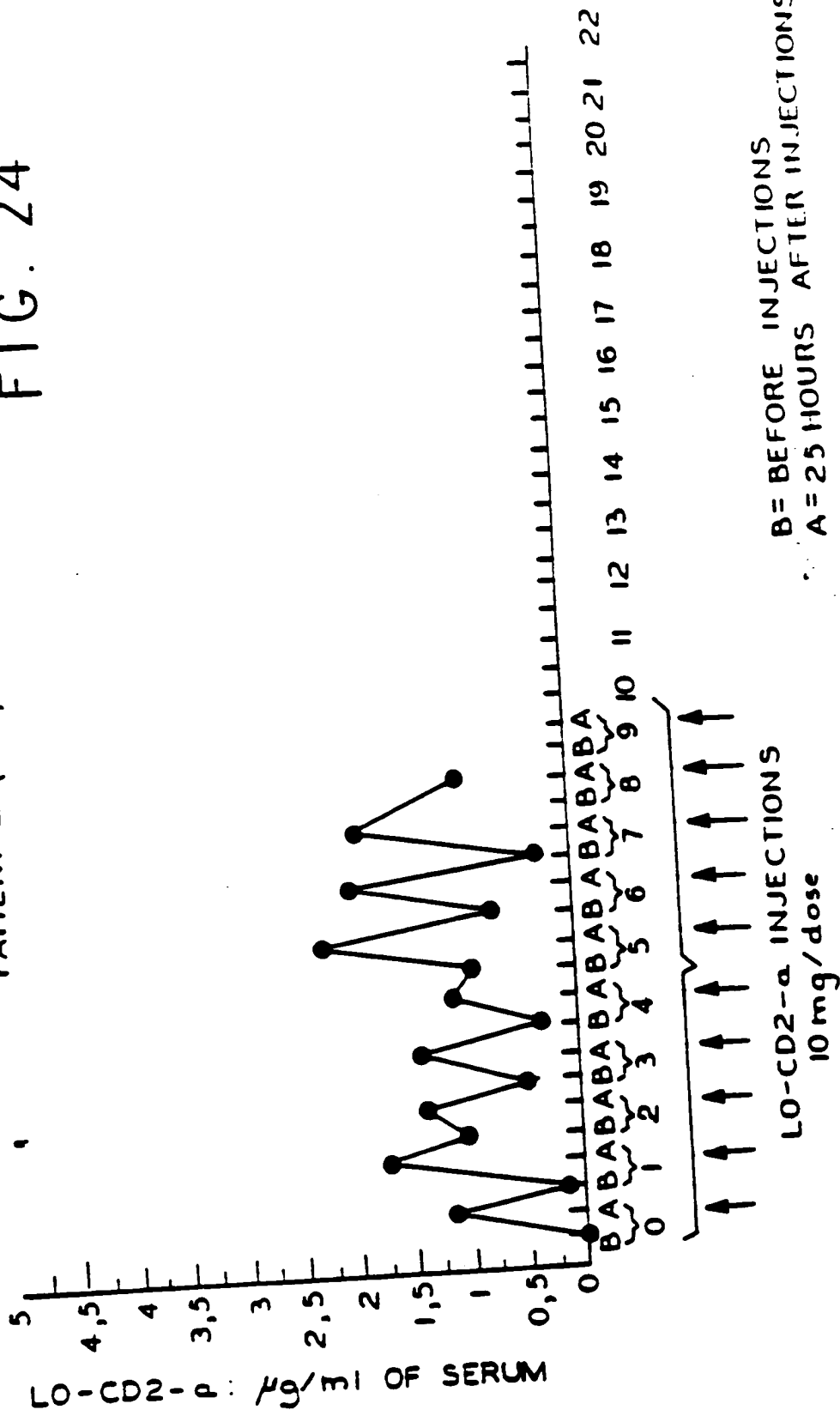
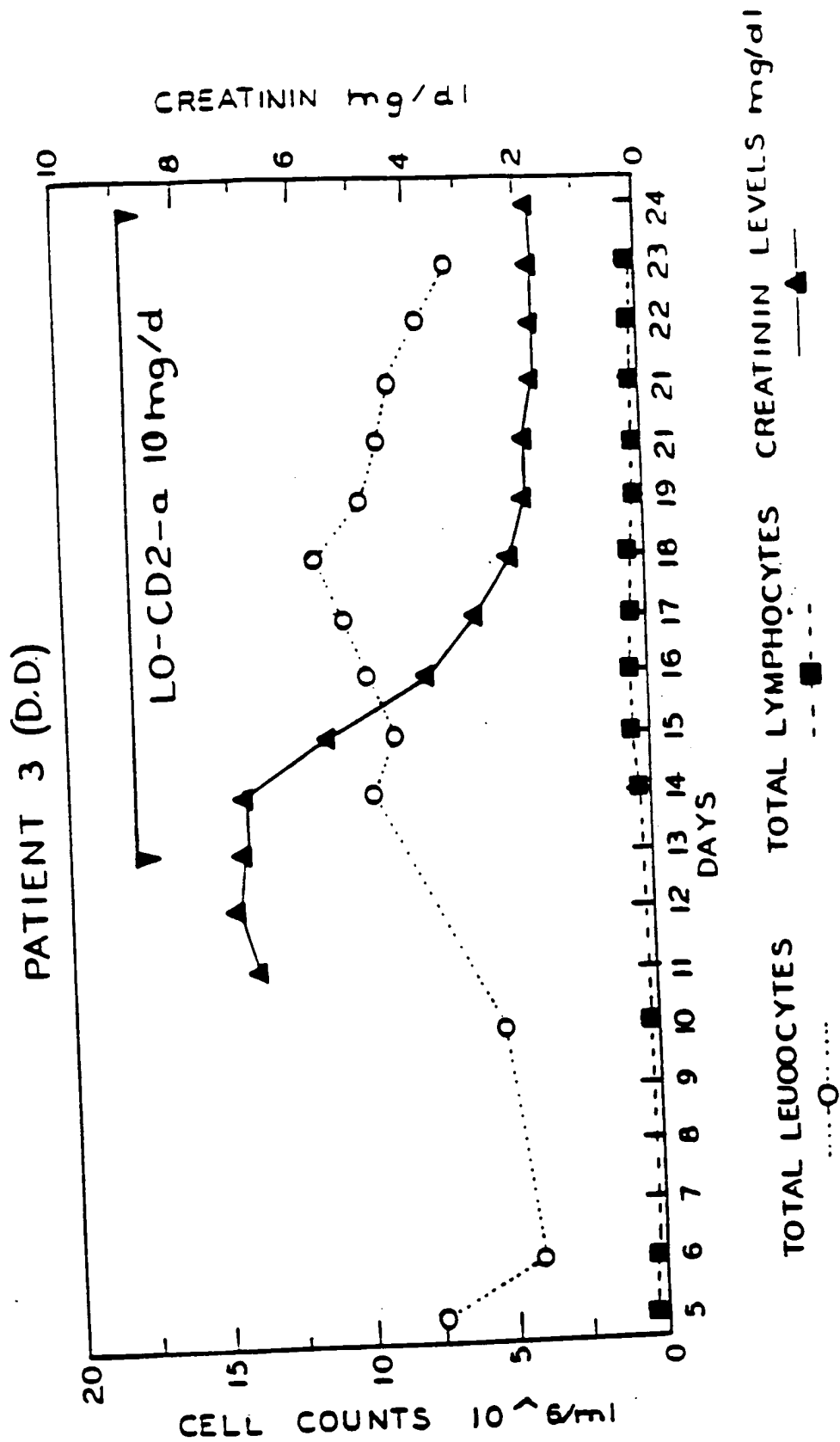


FIG. 25



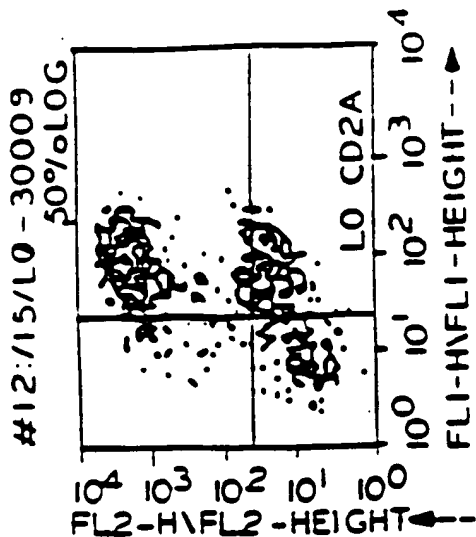


FIG. 26C

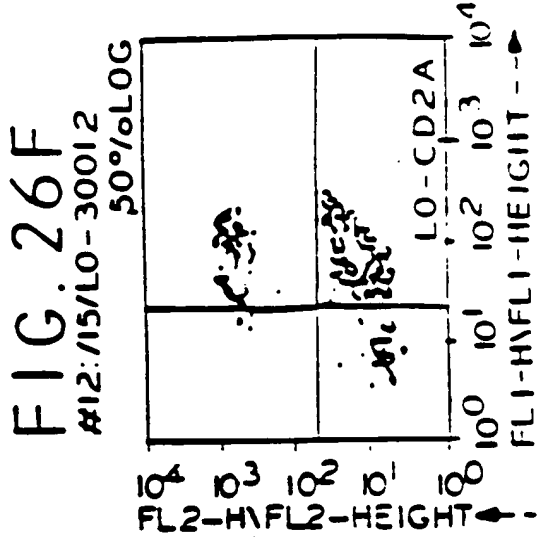


FIG. 26F

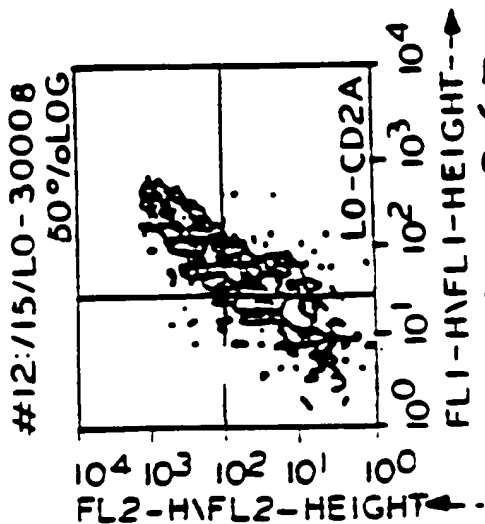


FIG. 26B

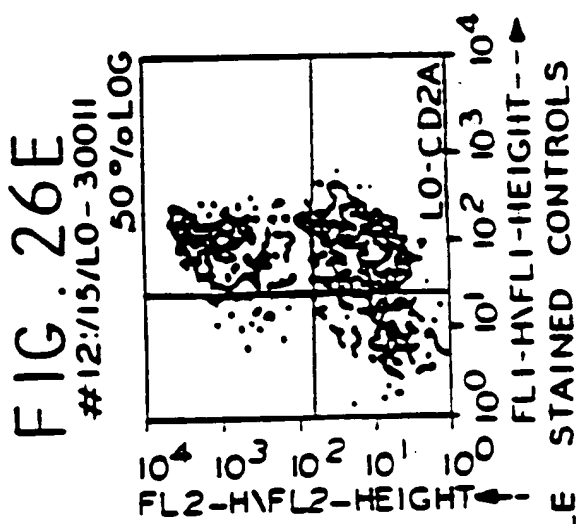


FIG. 26E

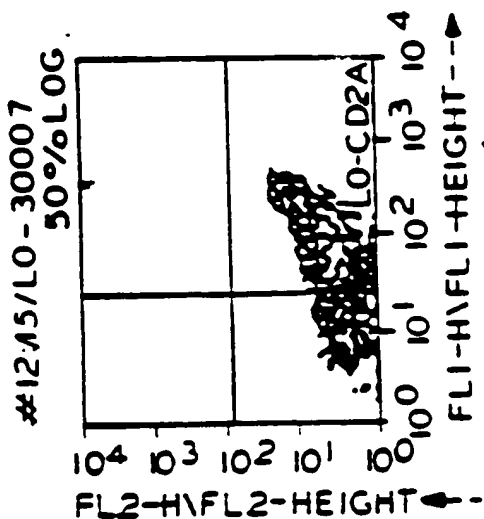


FIG. 26A

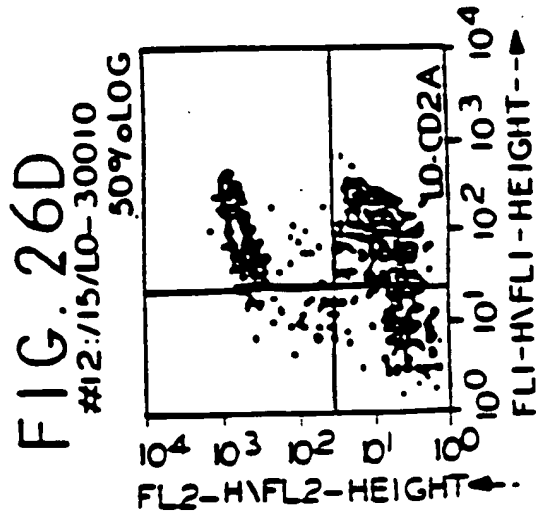


FIG. 26D

SINGLE STAINED CONTROLS

SINGLE STAINED CONTROLS

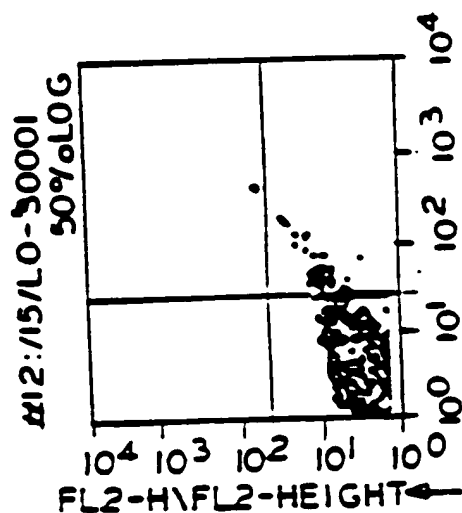


FIG. 26G

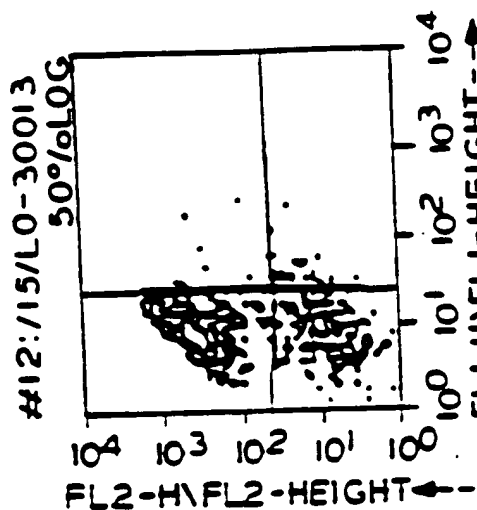


FIG. 26H

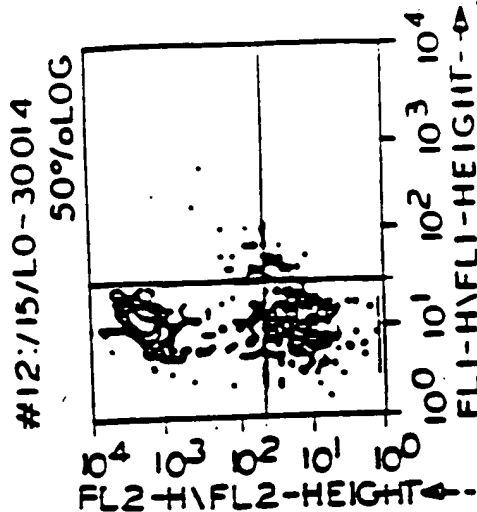


FIG. 26I

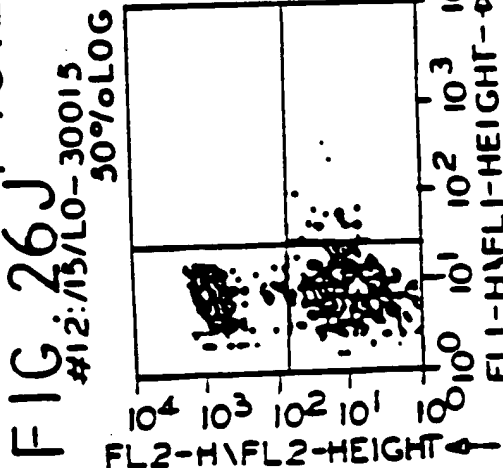


FIG. 26J

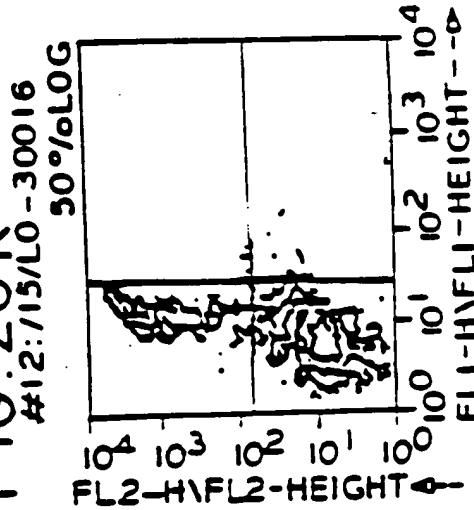


FIG. 26K

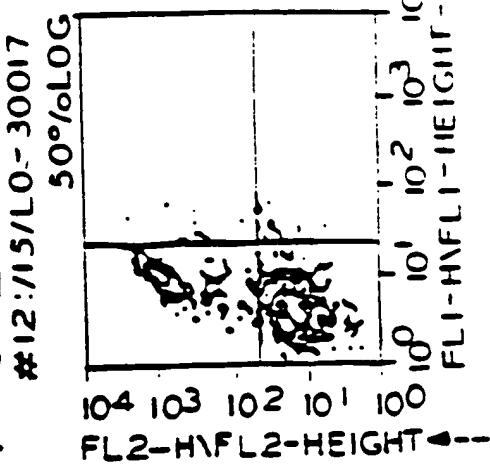


FIG. 26L

FIG. 27A

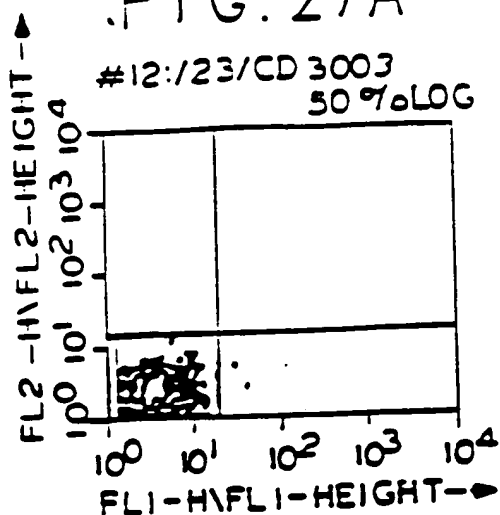


FIG. 27B

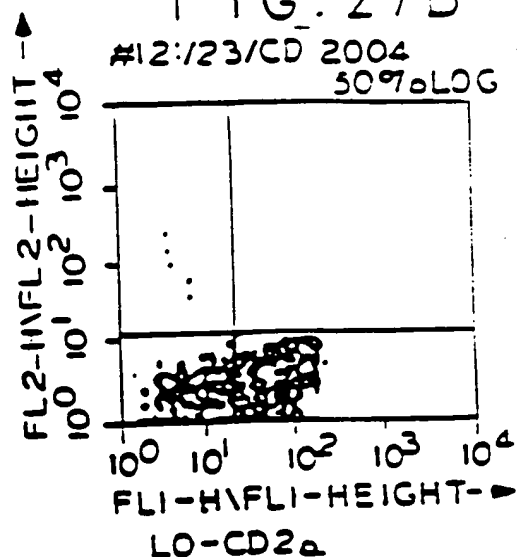


FIG. 27C

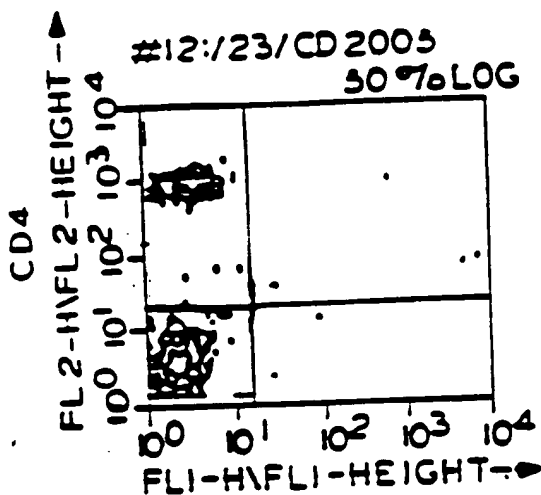


FIG. 27D

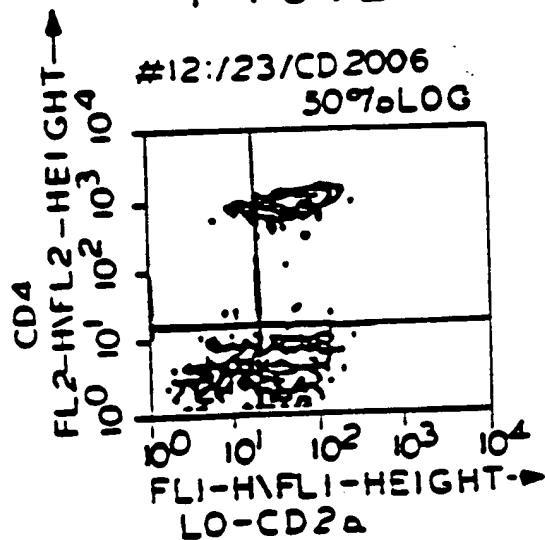


FIG. 27E

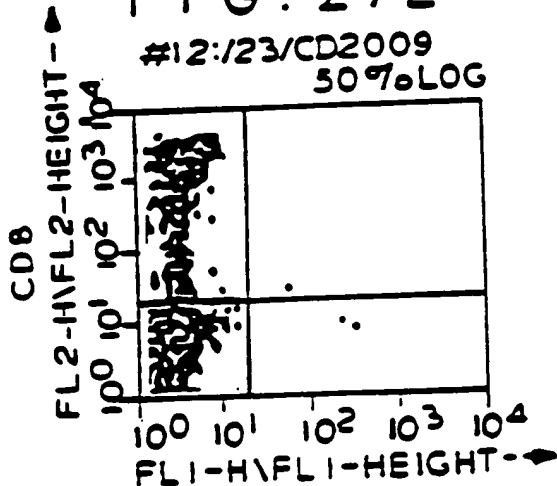


FIG. 27F

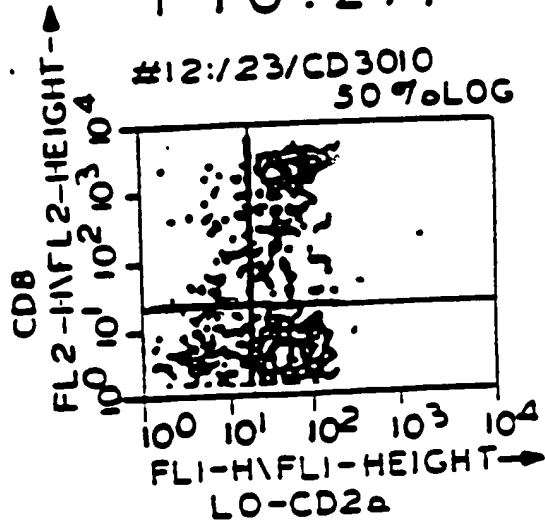


FIG. 27G ^{32/41}

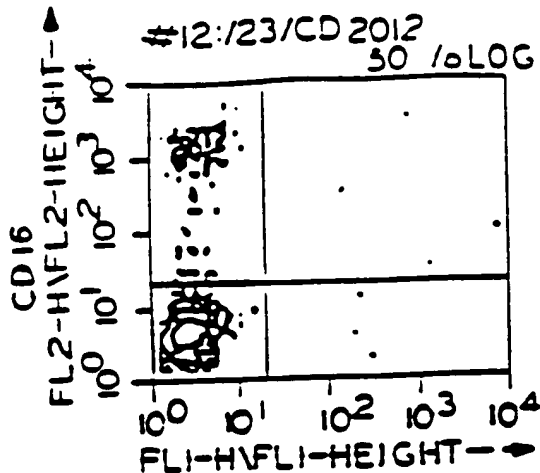


FIG. 27H

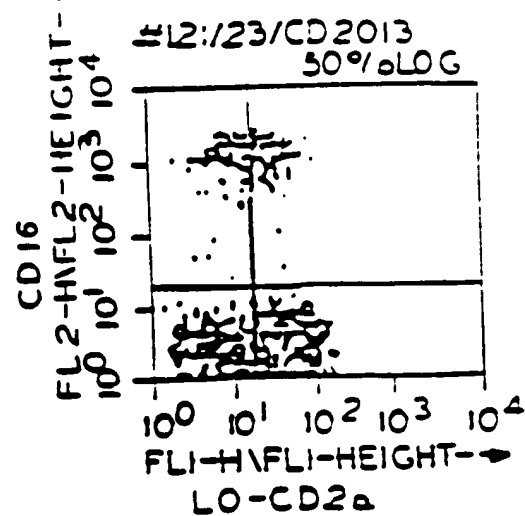


FIG. 27I

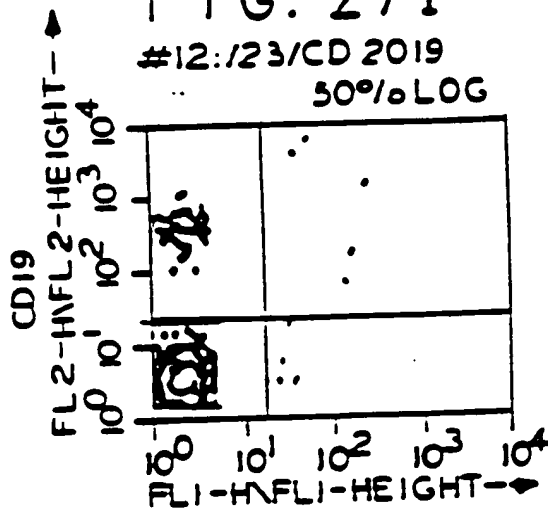


FIG. 27J

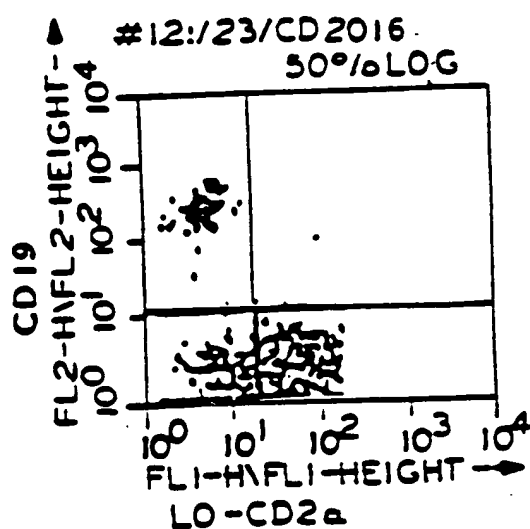


FIG. 27K

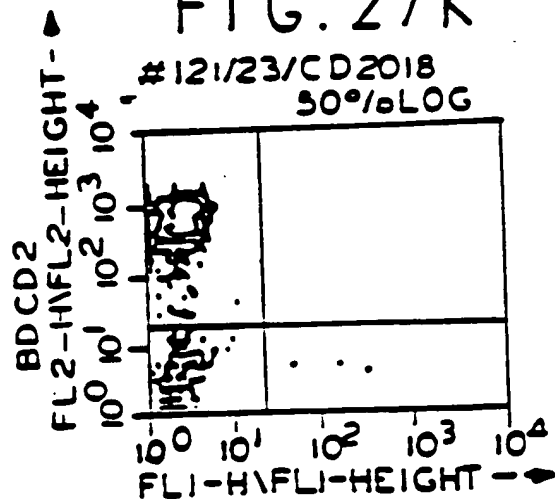
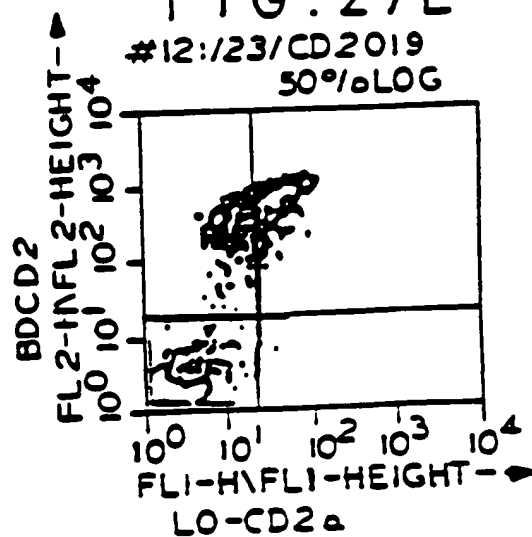


FIG. 27L



09056072, 040798

FIG. 28A

33 / 41

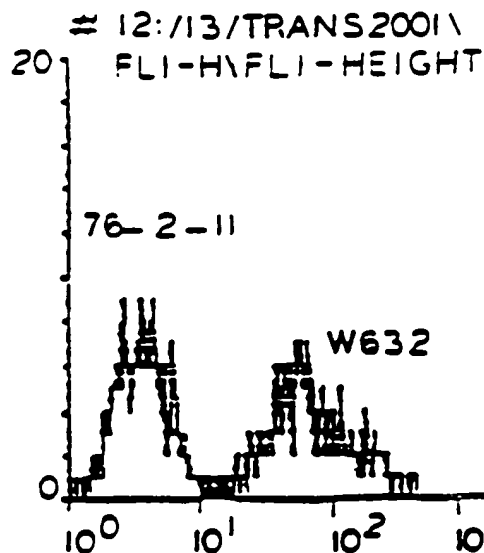


FIG. 28B

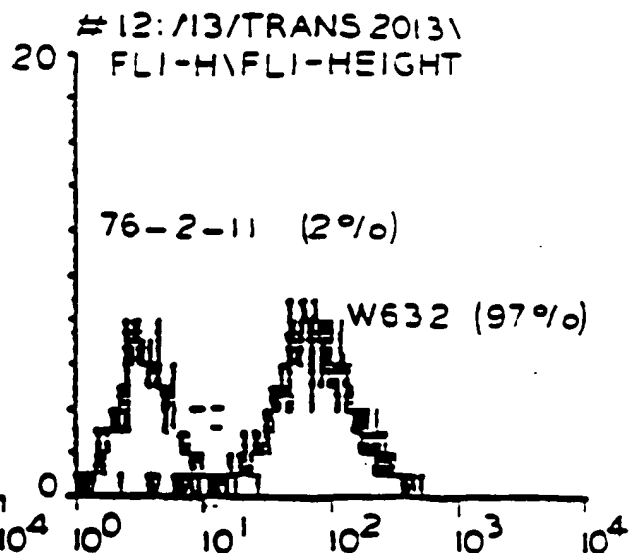


FIG. 28C

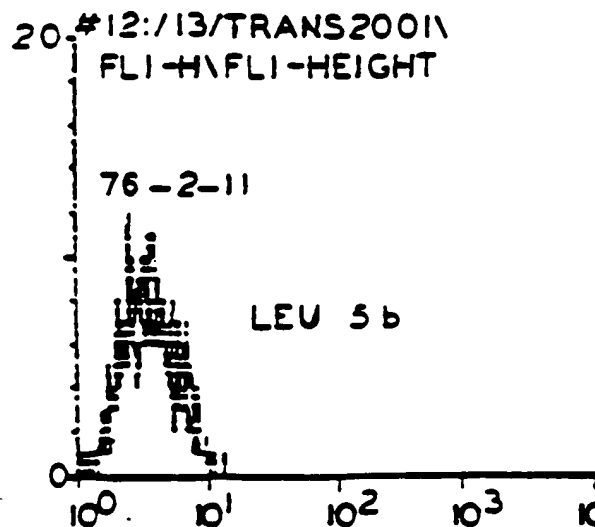


FIG. 28D

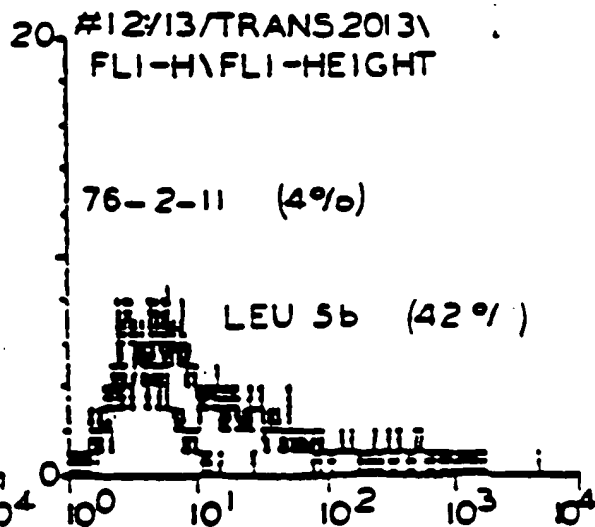


FIG. 28E

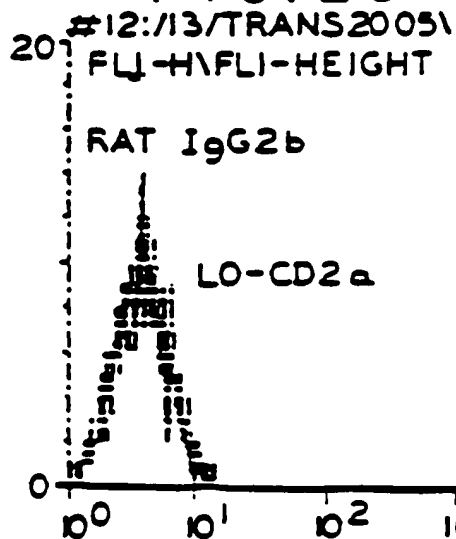
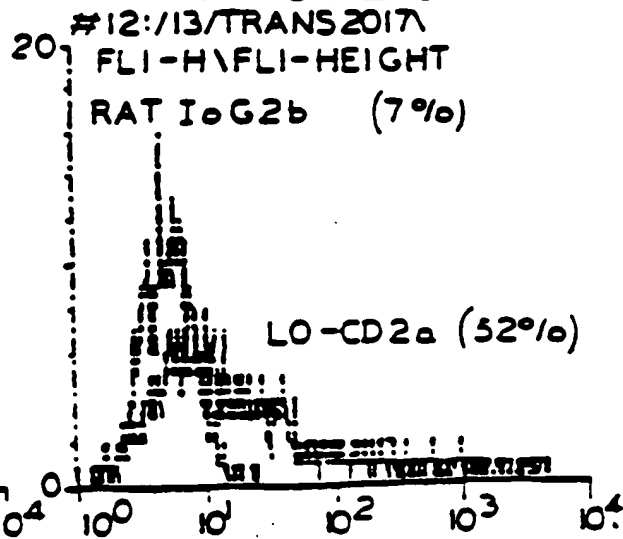


FIG. 28F



Lo-CD2a VI + Native Leader Sequence

Sequence Range: 1 to 761

```

*      *      *      *      *      *      *      *      *      *      *      *      *      *      *      *
10      20      30      40      50      60      70      80      90      100
*      *      *      *      *      *      *      *      *      *      *      *      *      *      *      *
ATGATGAGTCCCTGTCAGTCCCTGTTCTGTTATTTGCTTTGATTCCTGGTAACTAGAGATGAGTTACAGACCAAGAATGGGATGAGATGATCT
M M S P V Q S L F L L L L W I L G>
-10
*      *      *      *      *      *      *      *      *      *      *      *      *      *      *      *
110     120     130     140     150     160     170     180     190     200
*      *      *      *      *      *      *      *      *      *      *      *      *      *      *      *
GACTGCCCATGTTGGCTGCCATGTGTGTAAGCAGGCTCTATTCTTAAGATGACACTTGAGATTCCATTACTTGATAATGAAATTACAGATGAG
210     220     230     240     250     260     270     280     290     300
*      *      *      *      *      *      *      *      *      *      *      *      *      *      *      *
ATAGATTGTGCTAAGAGATTCTAATGTATGATGAGAAGGTGATGCCATTAGATCTGCAACCGAATTGTTGTGAAAAAGCAATTTGGTATATTT
310     320     330     340     350     360     370     380     390     400
*      *      *      *      *      *      *      *      *      *      *      *      *      *      *      *
TTAAAAATCACAAAACACACCGGATCTCACAGGAATGAGTAACAAAAAGTAATTACAAAGATTGTTGCAAAATTTTGACATTAATTGTTCTGATC
410     420     430     440     450     460     470     480     490     500
*      *      *      *      *      *      *      *      *      *      *      *      *      *      *      *
TATTATAATTTCAGAACCAATGATGTGTGCTGACCCAGACTCCACTTATTGCTTACCAATGACAAATCAGTCTCCATCTCTTGACAGTCA
TATTTATAATTTCAGAACCAATGATGTGTGCTGACCCAGACTCCACTTATTGCTTACCAATGACAAATCAGTCTCCATCTCTTGACAGTCA
T N G D V V L T Q T P P T L L A T I G Q S V S I S C R S>
510     520     530     540     550     560     570     580     590     600
*      *      *      *      *      *      *      *      *      *      *      *      *      *      *      *
AGTCAGAGTCTCTTACATAGTGTGAACACACTTATTAAATTGTTGCTTACAGAGACAGGCCAATCTCCACAGCGCTAATTTTATTTGATCCAAAC
S Q S L L H S S G N T Y L N W L L Q R T G Q S P Q P L I Y L V S K>
30
610     620     630     640     650     660     670     680     690     700
*      *      *      *      *      *      *      *      *      *      *      *      *      *      *      *
TGGAATCTGGGTCCTCCCAACAGGTTCAAGTCGACAGTGGGTGAGAACAGATTTCACACTCAAAATCAGTGAAGTGAAGCTGAGATTGGGGCTTATTA
L E S G V P N R F S G S G T D F T L K I S G V E A E D L G V Y Y>
710     720     730     740     750     760
*      *      *      *      *      *
CTGCATGCAATTTACCATTAATCCGTACACGTTTGACGCTGGACCAAGCTGGAAGTGAAG
C M Q F T H Y P Y T F G A G T K L E L K>
100

```

Fig-29

05056072.04079B

[illegible]

110 120 130 140 150 160 170 180 190 200
 * * * * * * * * * *
 CACTATCTTGATTCTTTCACAGGGCTCACTCAGAGTCCAGCTGCAGCAATCTGGCCTGAGCTTCAGAGACCCGGGGCTCAGTCAAGTTGCG
 V N S E V Q L Q Q S G P E L Q R P G A S V K L S>
 10

	210	*	220	*	230	*	240	*	250	*	260	*	270	*	280	*	290	*	300
TGCAGGCTTCTGGCTATATAATTACAGAATACTATACTGTACTGGTGACAGAGCCCTAACACAGGCCCTGAATTAAGTAGAAGCATCGATCCTGAAAG																			
C K A S G Y I F T E Y Y M Y W V K Q R P K Q G L E L V G R I D P E>	.	30	.									.40						50	

D G S I D Y V E K F K K A T L T A D T S S N T A Y M Q L S S L T S

60 70

	*	410	*	420	*	430	*	440	*	450	*	460	*	470	*	480	*	490	*
TGAGACACAGCAACTATTTTGTCTAGGGAAATTCACCTATCGATTGCTTACTGGGCCAAGCACCCCTCCTCACAGTCTCTCA																			
E D T A T Y F C A R G K F N Y R F A Y W G Q G T L V T V S S>																			
<i>90</i>								<i>180</i>						<i>110</i>					

5/17/95

030507Z JUN 68 0440Z

Light Chain Variable Region Sequence of rat LO-CD2a,
human HUM5400, and humanized LO-CD2a

	FR 1	CDR 1	FR 2
	* * 20	30 40 ** *	
Rat LO-CD2a Vk	DVVLITQTPPT LLATIGQSVS	ISCRSSQSL	HSSGNTYLNW LLQRTGQSPQ
Humanized Vk	---M---S---S---V-L---PA-	-----	-----P-----
Human HUM5400 Vk	---M---S---LS---PV-L---PA-	-----V	Y-D---H---FQ---P---R

	CDR 2	FR 3	CDR 3
	* 60 70	80 * 90 100	
Rat LO-CD2a Vk	PLIYLVSKLE SGVPNRFSQS	GSCTDFTLKI	SGVEAEDLGV YYCMQPTHYP
Humanized Vk	-----D-----	-----V-----	-----
Human HUM5400 Vk	R---K---NRD---D-----	-----R-----V-----	-----G---W-

	FR 4
	110
Rat LO-CD2a Vk	YTFGAGTKLE LK
Humanized Vk	---Q---I-
Human HUM5400 Vk	---Q---I-

31

867040-22095060

Humanized L.O-CD2a Light Chain V Region

Sequence Range: 1 to 807

10	20	30	40	50	60	70	80	90	100
AAGCTTCATGATGAGTCCTGTCAGTCCCTGTTTCIGTTATTCGCTTTGGATTCTGGGTAAGTAGAGAAATGAGTTACAGGACAAGAAATGGGGATGGAGGAT									
M M S P V Q S L F L L L L W I L G>									
110	120	130	140	150	160	170	180	190	200
GAGTCTGACTGCCCAATGTTGGCTGCTCCATGTTGTGTAAGGCAGGTCCTATTTTCTAAGATGGACACTTGAGATTCCATTACTTGATAATGAGAAATTAC									
210	220	230	240	250	260	270	280	290	300
AGATGAGATAGGATTTGTGCTAAGAGGATTTCTAATGTAGATGAGAAGGTGTAAGGATCTGCAACCGGAATGTTTGTGTAAGAAAGCATTTTGGT									
310	320	330	340	350	360	370	380	390	400
ATATTTTTTAAANAATCACAANAACACACCGGGATCTCACAGGAAATGAGTAACAANAAGTAATTCACAAAGATTTGGTTGCAAAATTTTGCACATAACTTTTGT									
410	420	430	440	450	460	470	480	490	500
TCTGATCTATTATTAATTTTCAGGAACCAATGGTGATGTGTGATGACCCAGAGTCCACCTTCATTATTGGTAACCTTGGACAAACAGCTTCCATCTCTTGG									
T N G D V V M T Q S P P S L L V T L G Q P A S I S C									
510	520	530	540	550	560	570	580	590	600
CAGGTCAAGTCAGAGTCTCTTACATAGTAGTGGAAACACCTATTTAAATTTGGTTGCTACAGAGCCAGGCCAATCTCCACAGCCGCTAATTTATTATTGGTA									
R S S Q S L L H S S G N T Y L N W L L Q R P G Q S P Q P L I Y L V>									
610	620	630	640	650	660	670	680	690	700
TCCAAACTGGAATCTGGGGTCCCGACAGGTTTCAGTGGCTCAGGGAGTGGAAACAGATTTCACACTCAAAATCAGTGGAGTGGAGCTGAGGATGTGGGGG									
S K L E S G V P D R F S G S G S G T D F T L K I S G V E A E D V G>									
710	720	730	740	750	760	770	780	790	800
TTTATTACTGCATGCAATTTTACCCATTATCCGTACACGTTTGGACAAGGGACCAAGCTGGAATCAAAACGTGAGTAGAATTTTAAACITTTTGTCTTCCTCAGT									
V V V C M O F T H Y P Y T F G Q G T K L E I K>									

TGGATCC

Fig 32

5/6/7/8/9

Heavy Chain Variable Region Sequences of rat LO-CD2a, human Amu 5-3, and humanized LO-CD2a

	FR 1			CDR 1	FR 2	
	10	20	30	40	* 50	
Rat LO-CD2a Vh	EVQLQQSGPE	LQRPASVKL	SCKASGYIFT	EYYHWYKQR	PKQGLELVGR	
Humanized Vh	Q---V---A-	VKK-----V	-----T--	-----A-	-G-----M--	
Human Amu 5-3 Vh	Q---V---A-	VKK-----V	-----T--	C---H--R-A	-G-----WM--	

	CDR 2		FR 3			
	60		* * * *	80	* * 90	100
Rat LO-CD2a Vh	IDPEDGSIDY	VEKFKKKATL	TADTSSNTAY	MQLSSLTSED	TATYFCARGK	
Humanized Vh	-----	-----V--	-----S--	-E-----D-	--V-Y-----	
Human Amu 5-3 Vh	-N-NS-GTN-	AQ--QGRV-M	-R---IS---	-E--R-R-D-	--V-Y-----R	

	CDR 3	FR 4
	110	
Rat LO-CD2a Vh	FNYR/////FAYWGQ	GTLVTVSS
Humanized Vh	-----	-----
Human Amu 5-3 Vh	TE-IVVAEG-D----	-----

Fig. 33

09055072-040798

Humanized LO-CD2a Heavy chain V region

Sequence Range: 1 to 701

AAGCTTCATGAATGCAGGTGGATCATCCTCTTCTTGATGGCAGTAGCTACAGGTAAGGCACCTCCCAAGTCCTAAACTTGAGAGATCATACACTTGGGAG
M K C R W . I I L F L M A V A T G>

ACAGTGACACTATCTTTGGATTCTTTTCAACAGGGGTCAACTCACAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAAGCCTGGGGCCTCAGTGAA

GGTCTCCTCGCAAGGCTTCTGGATACACCTTCACCGAGTACTATATGTACTGGGTGCGACAGGCCCTGGACAAAGGCTTGAGCTGATGGGAGGATCGAT

310 * 320 * 330 * 340 * 350 * 360 * 370 * 380 * 390 * 400 *
 CCTGAAGACGGTAGTATTGATTGTTGAGAAGTTTAAGAAAAGGTACCCCTGACCGCTGACACGTCCTCTAGCACAGCCTACATGGAGCTGAGCAGCC

* * * * *
 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500
 TGACCTCTGACGACACGGCCGCTGATTACTGTGCGAGAGGAAAGTTTAACCTATAGGTTTGTCTTACTGGGGCCCAAGGAACCTGGTCAACGGTCTCTCCTCAGG

* 510 520 530 540 550 560 570 580 590 600
 TGAGTCCTTACAAACCTCTCTCTCTCTATTCAGCCTTAAATAGATTTTATCTGCATTTGTGGGGGGAATAATGTCGTATCTCGAAATTCAGGTCAATGAAGGACT

* 610 620 630 640 650 660 670 680 690 700
 AGGGA CAC CCT TGG GAG TCA GAA A GGG TCA TTG GGA GCC CGG GTG ATG CAG A CAG A CAC ATC CT CAG CT CCG GACT TCA TGG CC CAG AGA GTT TAT AGG GAT C

U

Fig. 34

56/11/15

Binding of LO-CD2a and LO-CD2a Hu to Jurkat Cells

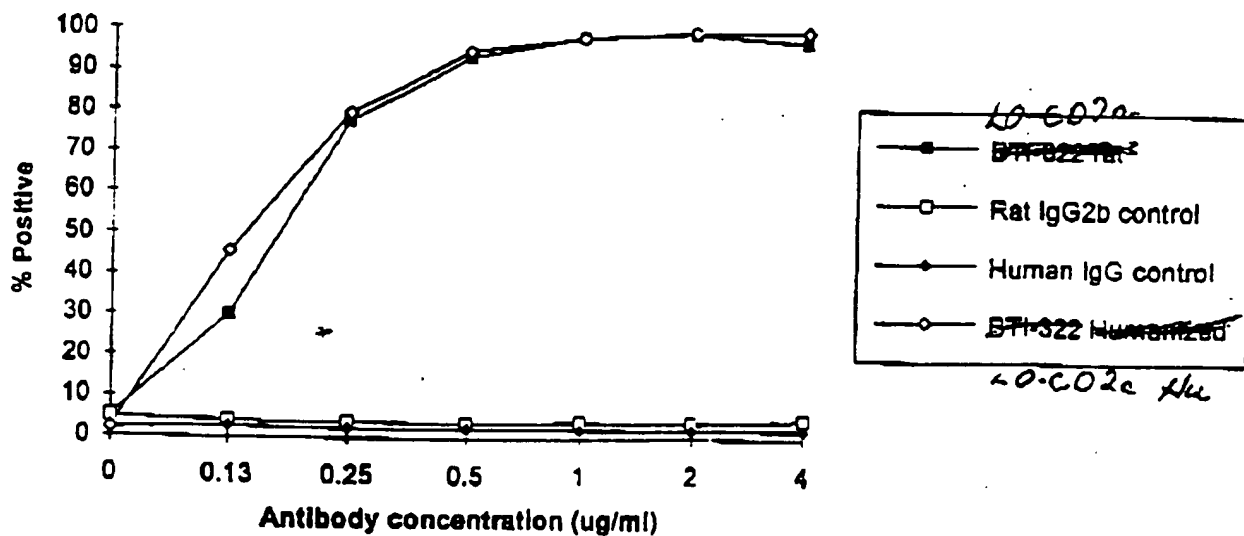


Fig. 35

Induction of Hyporesponsiveness *in vitro*

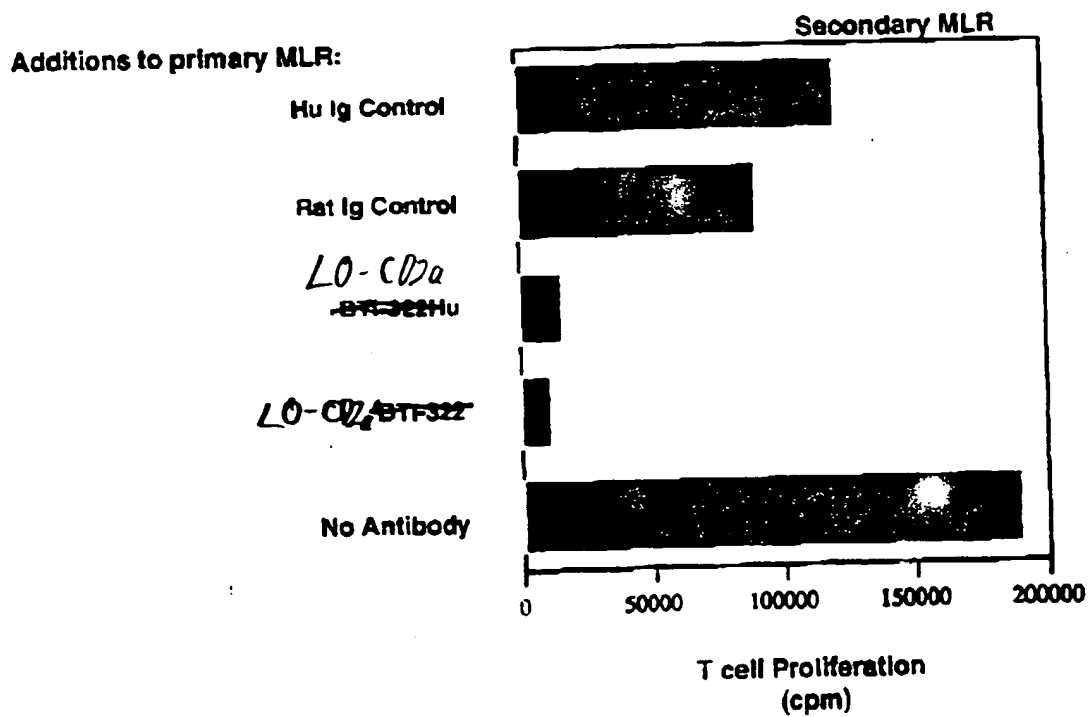


Fig. 3.6

09056072-040798

09056072-040798

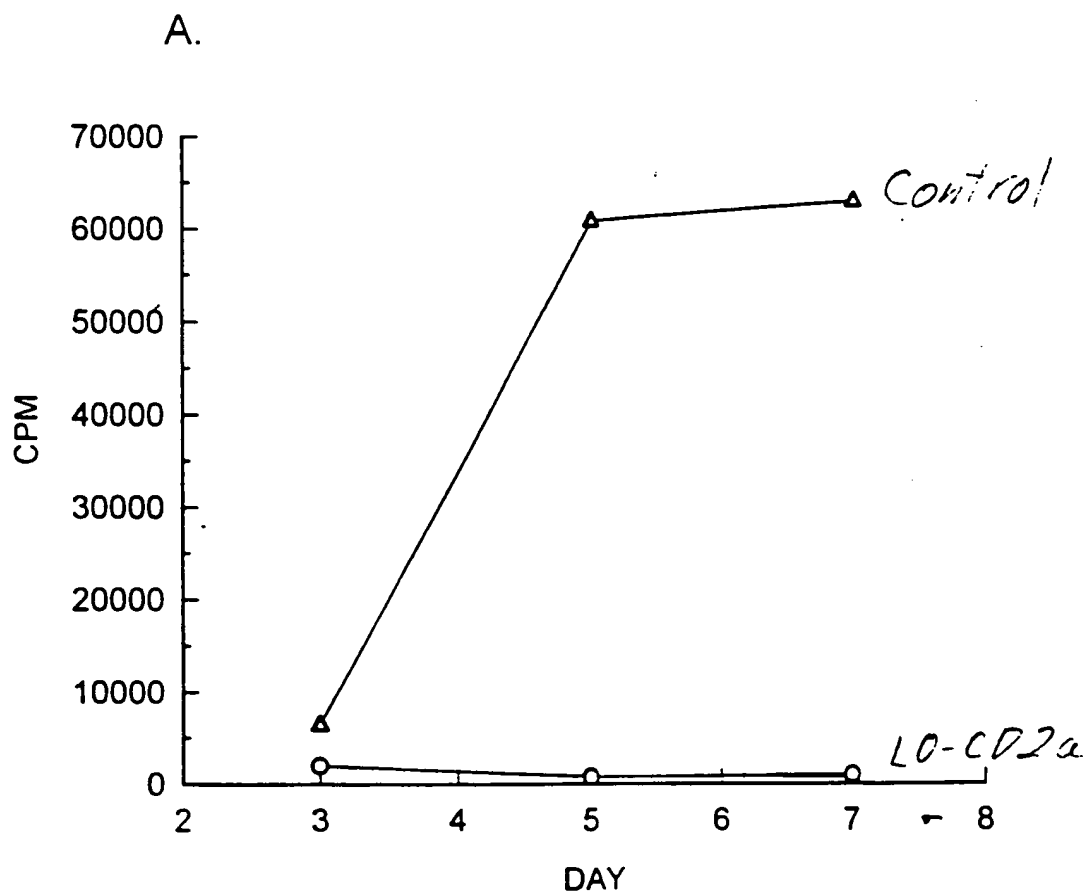
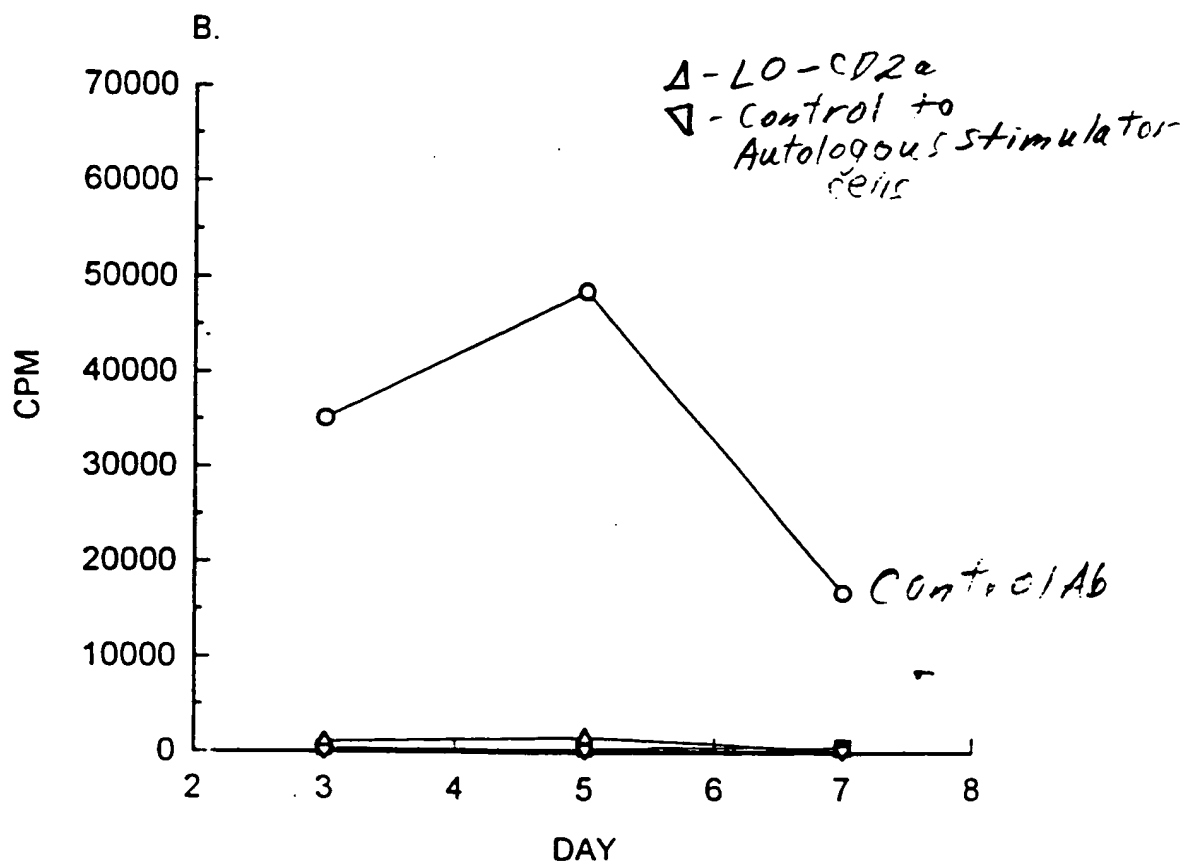


Fig. 37A

09056072 24095060



110 578

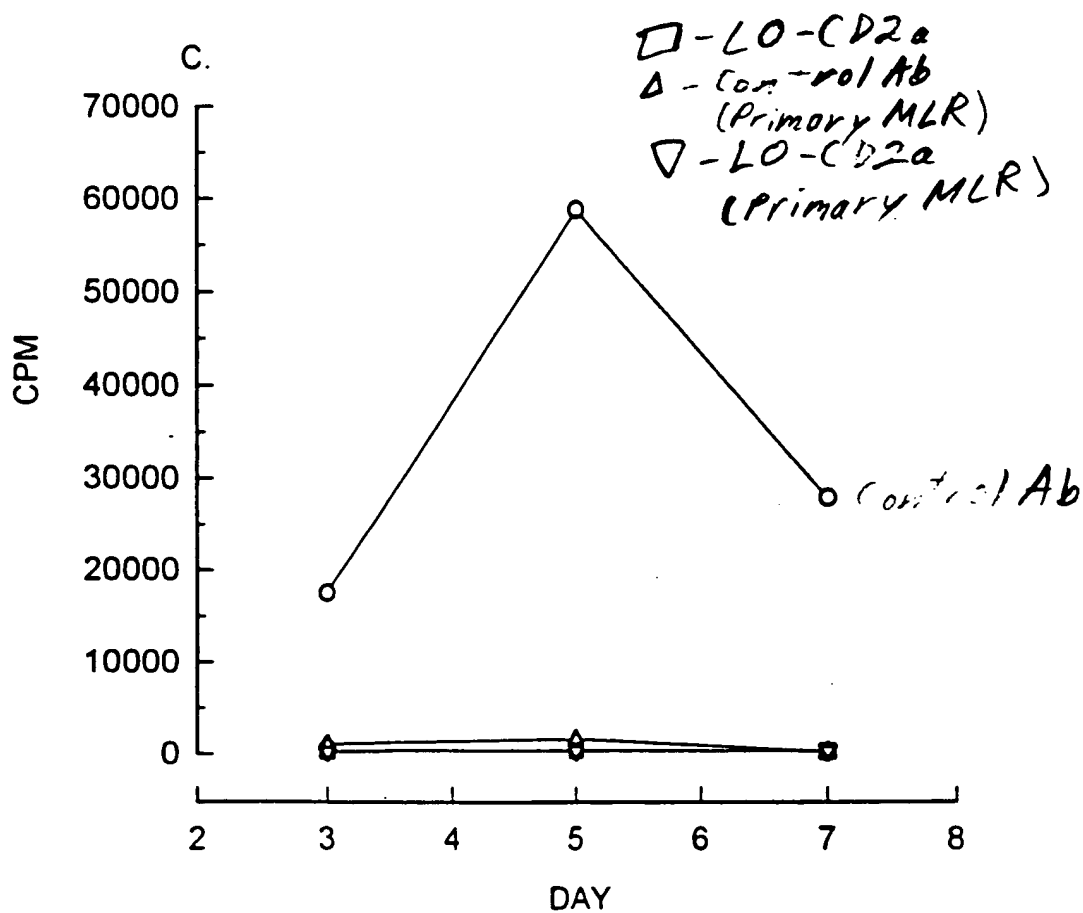


Fig. 37C

862040" 22095060

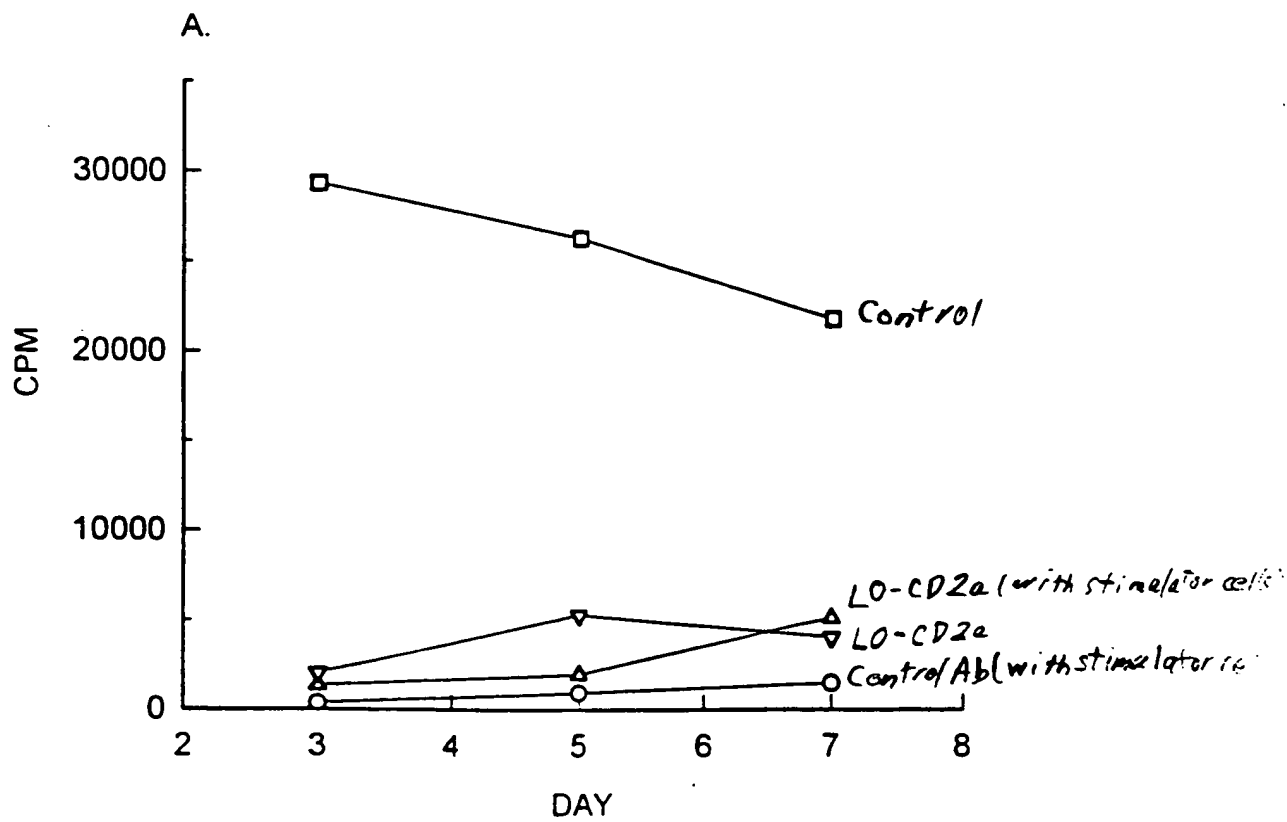


Fig. 3A

862040-24095060

2

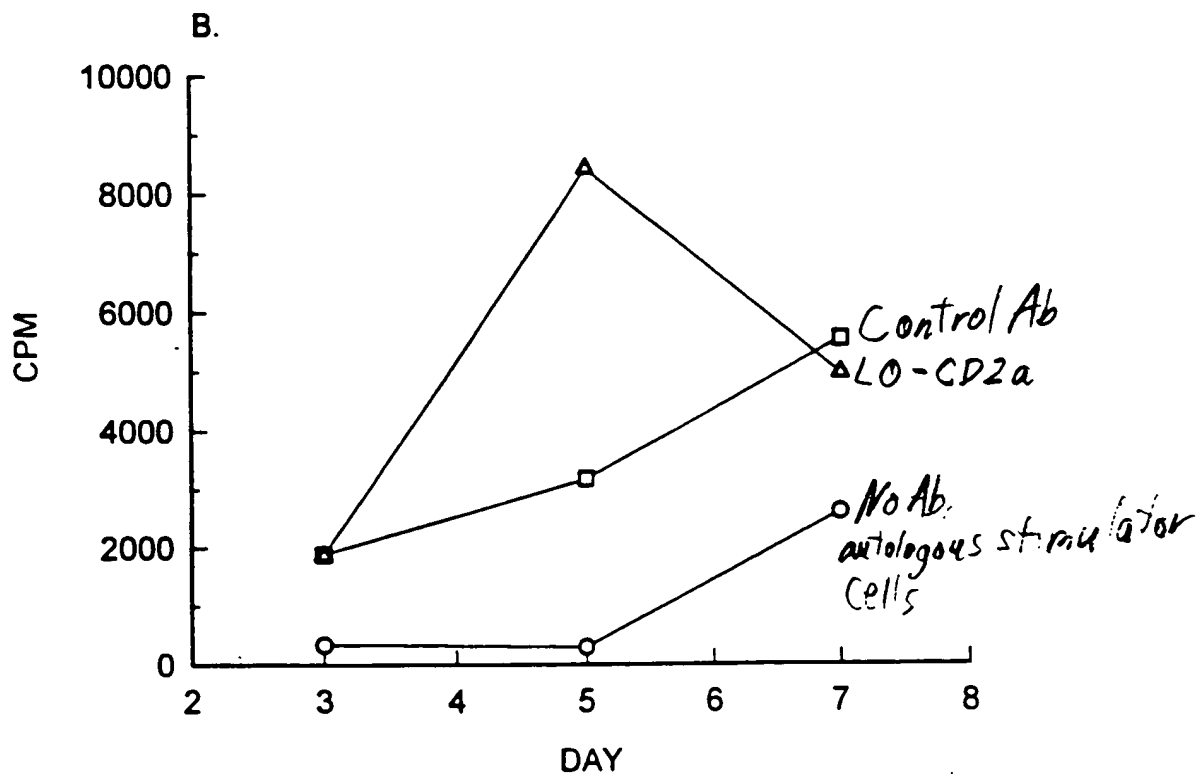


Fig. 3PB

862040-22095060

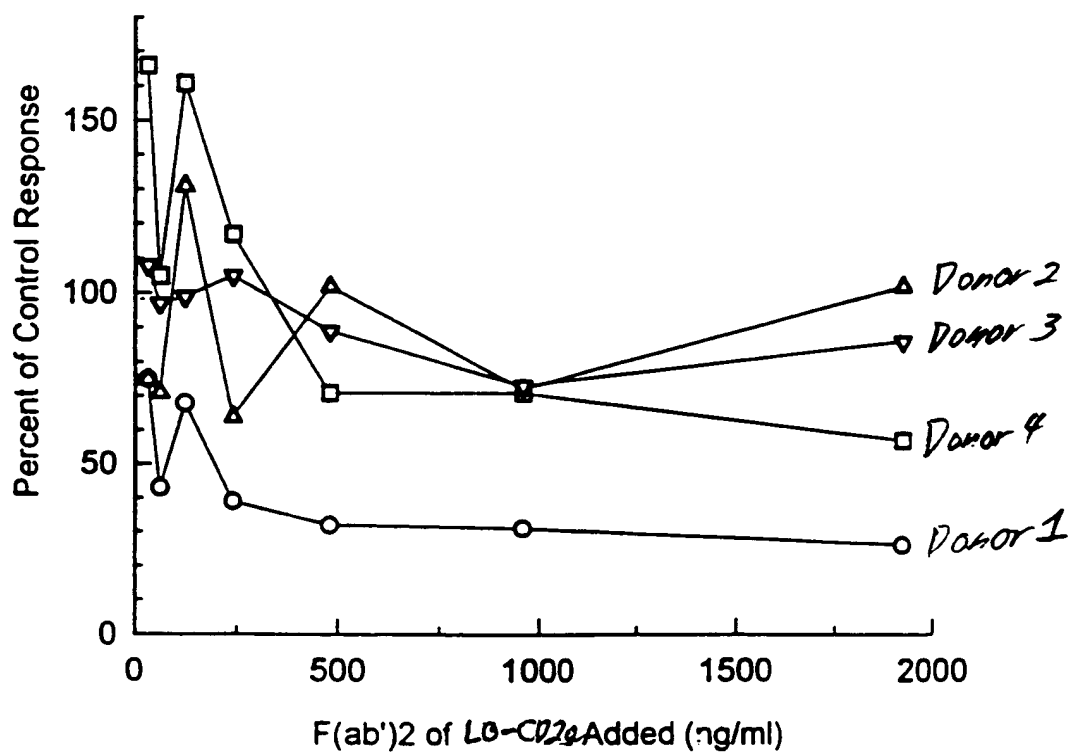


Fig. 39

362040" 2/095060

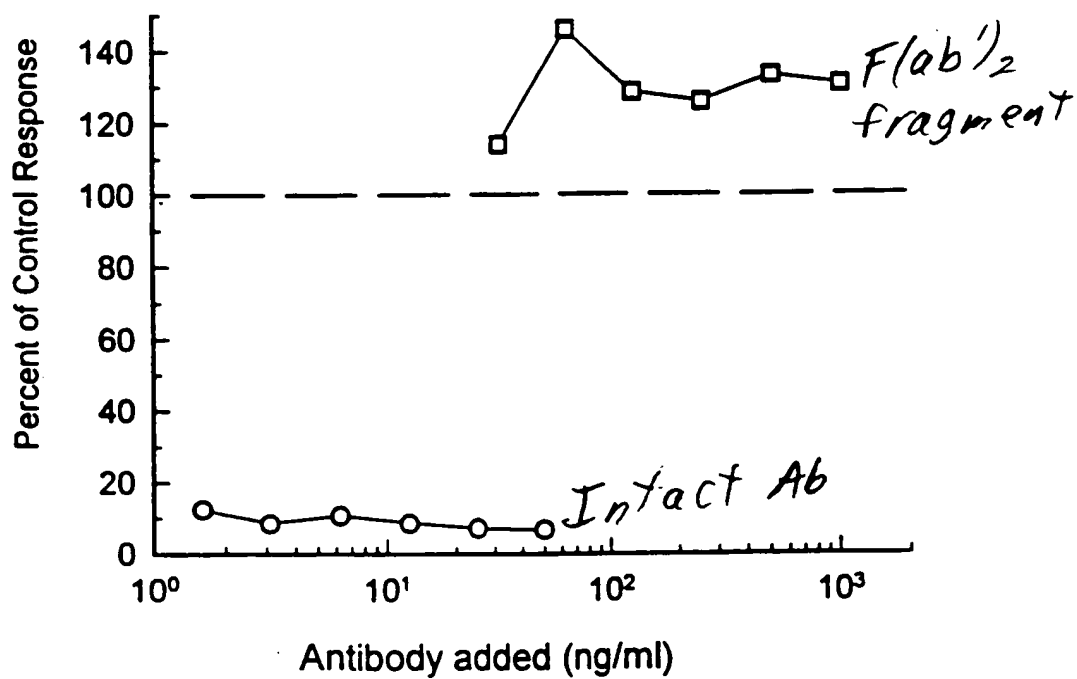


Fig. 40

862040" 22095060

1

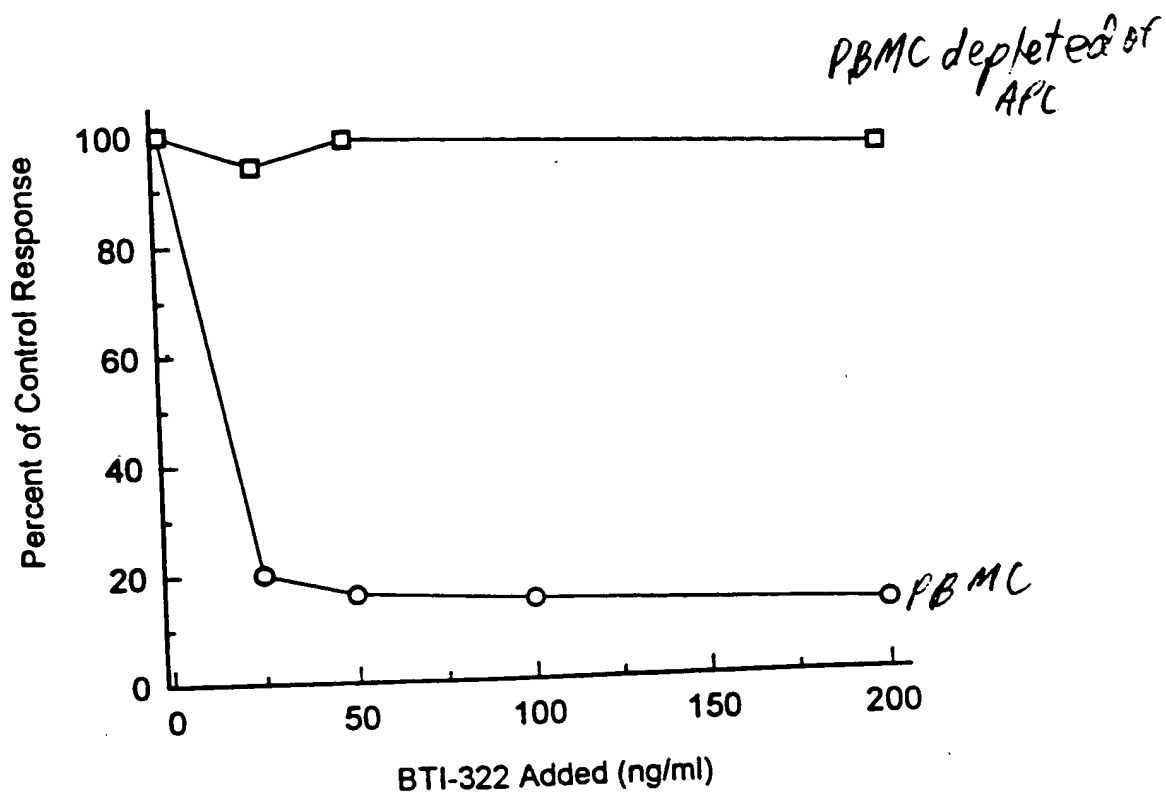


Fig 41